SHAVSHA-TOLKACHEVA, T. G.

USSR.

Dipole moments of some derivatives of ethylphosphinic and ethylphosphonic acids. B. A. Arbuzov and T. G. Shavsha-Tolkacheva (V. I. Ul'yanov-Lenin State Univ., Kazan). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1954, 812–22.—Esters of type EtP(O)(H)(OR) have an av. dipole moment of 3.35 D. which exceeds that of $(RO)_2POH$ (3.08 D.). The av. dipole moment of $EtPS(OR)_2$ is 3.08 D., whereas that of $EtCCl_2P(O)(OR)$ is 3.21 D. Esters of type EtP(O)(H)OR (cf. *C.A.* 47, 9904c) have the following dipole moments (measured at 25° in B_6H_6 by extrapolation method with allowance of 5% of the electronic polarization for the at. polarization factor) (R shown): Me 3.17, Et 3.48, Pr 3.37, iso-Pr 3.34, Bu 3.41, iso-Bu 3.38, C_5H_{11} 3.36, C_7H_{15} 3.31, C_8H_{17} 3.27, C_9H_{19} 3.34, $C_{10}H_{21}$ 3.42. On the basis of OPO angle of 118°, OPC angle of 100° and equal to OPH angle, and the bond dipoles of: P(O) 3.5 D., P-O 1.2, R-O 1.12, H → P 0.55, P → C 0.8 D. (cf. Shavsha, *Uchenye Zapiski Kazan. Gosudarst. Univ.* 110, 84(1950)) the above values call for an assumption of free rotation of the OR group about the PO axis; the calcd. moment for a rotationless model with the OR link directed roughly along orientation of the P(O) link gives a total dipole of 1.61 D.; thus the rigid structure is excluded. The interat. distances in these esters are taken to be: P-O 1.76, R-O 1.43, P-H 1.47, P-C 1.87 A. The P-C moment is directed to C, which is also found in $EtP(S)(OR)_2$. The dipole moment of $EtP(S)(OEt)_2$ is 3.22 D. and of $EtP(S)(OPr)_2$ is 2.95 D. In these esters the S-P-O angle is taken at 118–19°, O-P-O angle at 100°, as is the O-P-C angle. It is claimed that introduction of an OR group does not cause a great change in the geometric structure of dipole direction of the

mol. On the basis of a PS dipole of 3.6 D. (other values as above), these results call for restricted rotation of OR groups about the PO axis, occurring synchronously. The dipole moment of $EtCCl_3P(O)OMe$ is 3.20 D.; $Et_2CCl_3P(O)OEt$ 3.15; $EtCCl_3P(O)OPr$ 3.29; assumption of a C-CCl_3 moment of 2.3 D. directed from P leads to a considerably different moment. If, however, the P-C-Cl_3 moment is assumed as 2.5 D. and directed from P to Cl, the calcd. moment agrees with the exptl. value provided that the P-C moment is taken as 0.8 D. directed from C to P; although this direction contradicts the expected electron flow or displacement in this bond. Calcn. of the moment of the CCl_3 group from that of $CHCl_3$ (1.15 D.) gives 0.75 D. directed from C to Cl, which leads to the P-C-Cl_3 moment of 1.6 D. if it is assumed that the moment of P-C bond is directed from P to C and is of the order zero. To establish the dipole moment of the $PCCl_3$ link, the moment of $CCl_3P(O)(OEt)_2$ was detd. as 3.25 D., which agrees with the calcd. value that allows for free rotation of OR groups only if the P-CCl_3 link moment is either zero or 4.15 D.; the former value can exist only if the P-C moment is 0.8 D. directed from C to P, and the moment of C-Cl_3 is also 0.8 D. and directed from C to Cl. The change of electronegativity in the PC link from 2.1 to 2.5 D., and that of C-Cl link from 2.5 to 3.0 D. is nearly equal. On the basis of the moment of P-C → Cl_3 being zero, the exptl. value of the dipole moment agrees with the calcd. value based on typical pyramidal structure (3.95 D.) with free rotation of the OR group and Et-P moment of 0.8 D. directed from P to C.

G. M. Kosolapoff

SHAVSHA-TOLKACHEVA, T. G.

USSR/ Chemistry Physical chemistry

Card : 1/1 Pub. 40 - 6/27

Authors : Arbuzov, B. A., and Shavsha-Tolkacheva, T. G.

Title : Dipole moments of orthopropionic and orthoformic acid esters

Periodical : Izv. AN SSSR. Otd. khim. nauk 4, 614 - 621, July - August 1954

Abstract : The dipole moments of various orthopropionic and orthoformic acid esters were measured and the results are shown in a table. It is evident that the dipole moments, of the above mentioned esters, are much higher than the dipole moments of orthocarbonic acid esters. An analogy between phosphorous acid esters and orthopropionic acid esters was established by the disposition of the dipole moments of individual bonds. The interatomic spaces of various molecular ester models were calculated with consideration of the affective radius of the van der Waals forces. Nine references: 6 USSR; 2 German and 1 USA (1929 - 1951). Tables.

Institution : The V. I. Lenin State University, The A. M. Butlerov Scientific Research Institute, Kazan

Submitted : June 25, 1953

SPERANSKIY, B.A., kand.tekhn.nauk; SHAVSHUKOVA, G.N., inzh.; OL'KOV, Ya.I., inzh.

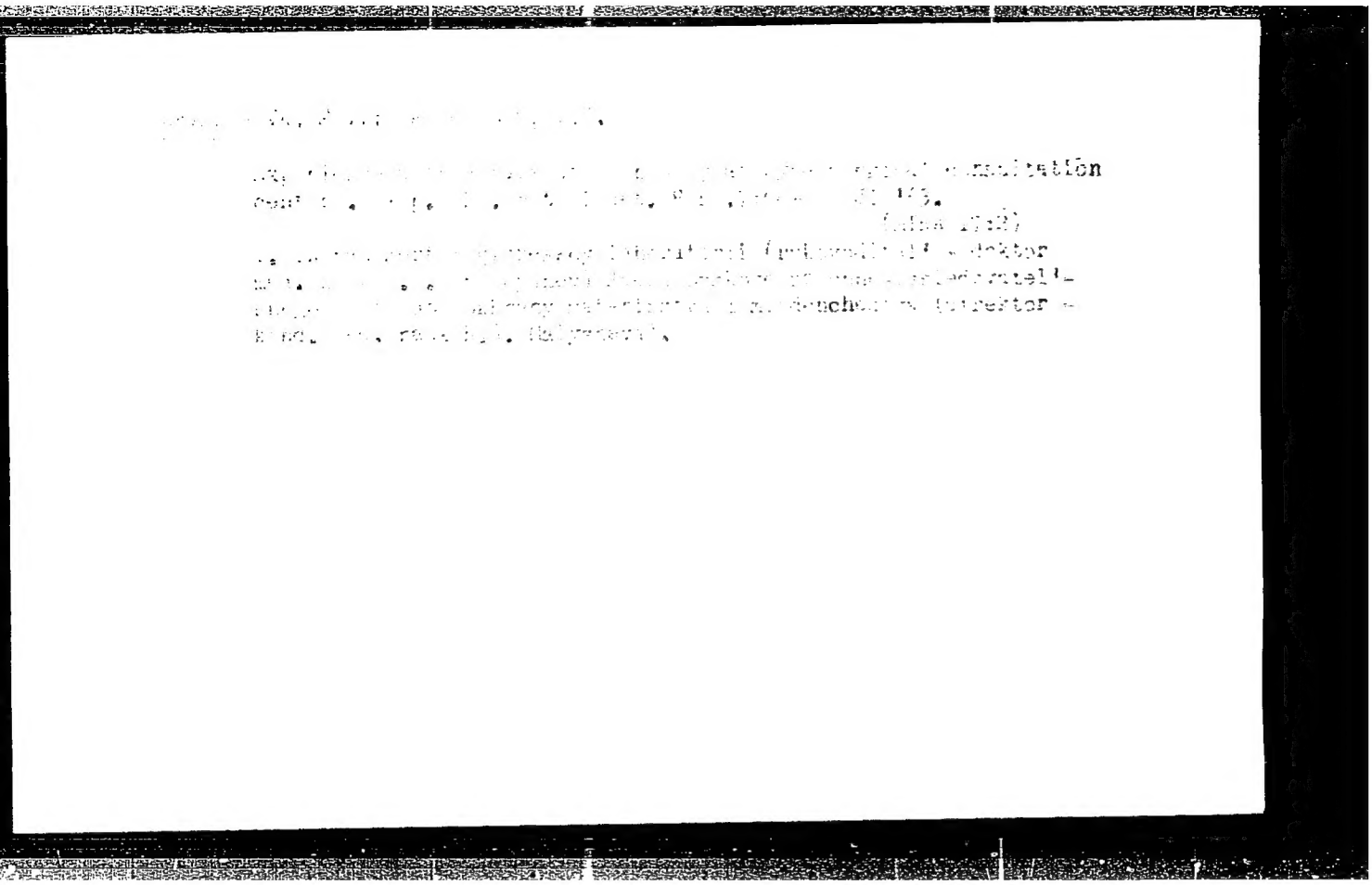
Methods of prestressing steel structures with stressed elements of high-strength steel. Trudy NII prom.zdan.i soor. no.5:124-143 '61. (MIRA 15:4)

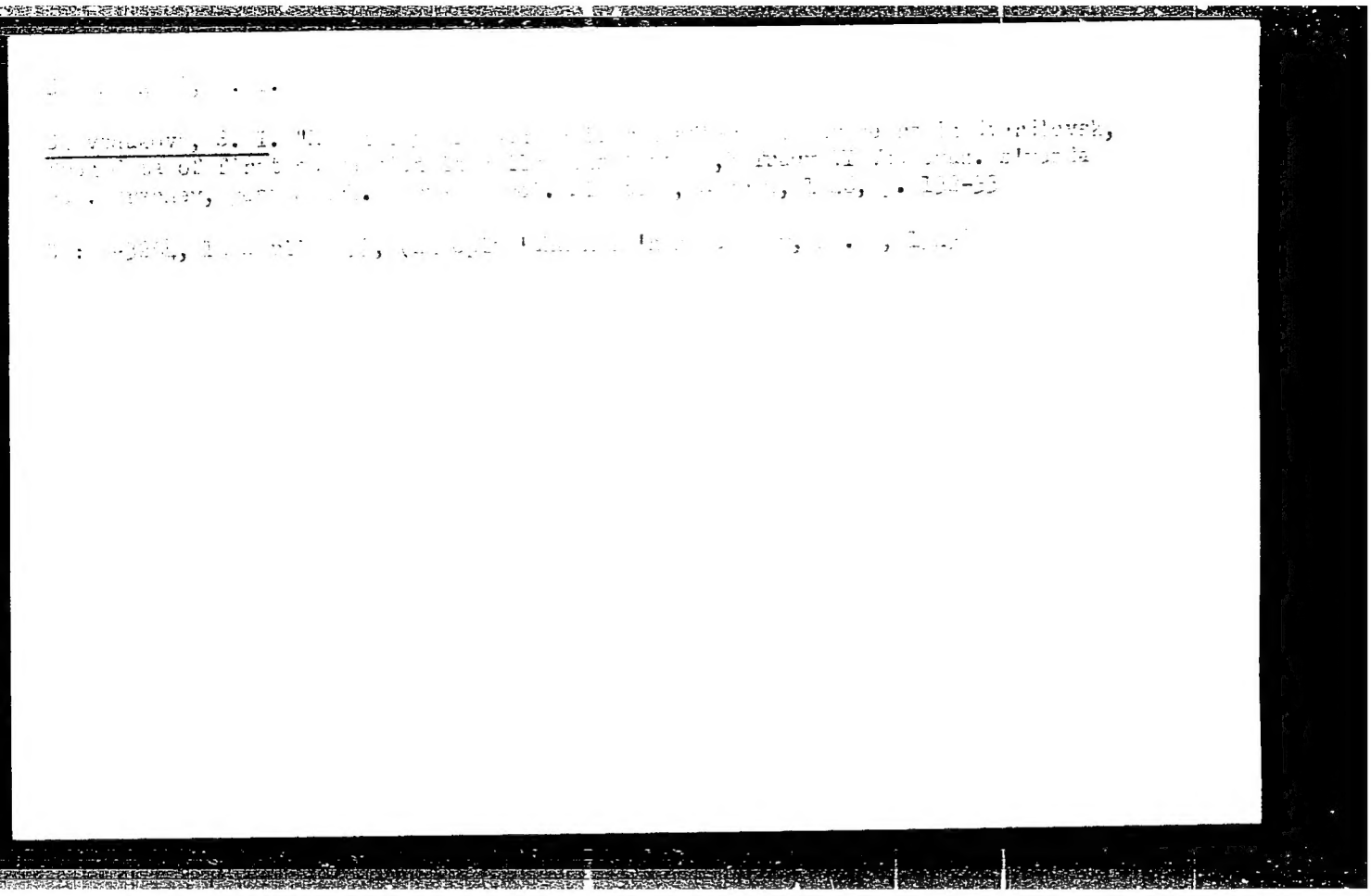
(Steel, Structural)

LABZENKO, V.I., kand. tekhn. nauk; SMIRNYAGIN, Yu.V., inzh.; VOLODARSKIY, B.Ya., inzh.; FLOROV, R.S., kand. tekhn.nauk; SPERANSKIY, B.A., kand. tekhn.nauk; SHAVSHUKOVA, G.N., inzh.; OL'KOV, Ya.I., inzh.; TAMPLON, F.F., inzh.; SUKHANOV, V.P., inzh.; TIMASHEV, S.A., inzh.; BOLOTINA, A.V., red.izd-va; KOROBKOVA, N.I., tekhn. red.

[Progressive metal elements for industrial construction] Progressivnye metallicheskie konstruktsii dlia promyshlennogo stroitel'stva. [By]V.I.Labzenko i dr. Pod red. V.I.Labzenko i R.S.Florova. Moskva, Gosstroiizdat, 1963. 183 p. (MIRA 16:4)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut po stroitel'stvu, Sverdlovsk.
(Steel, Structural) (Aluminum alloys)

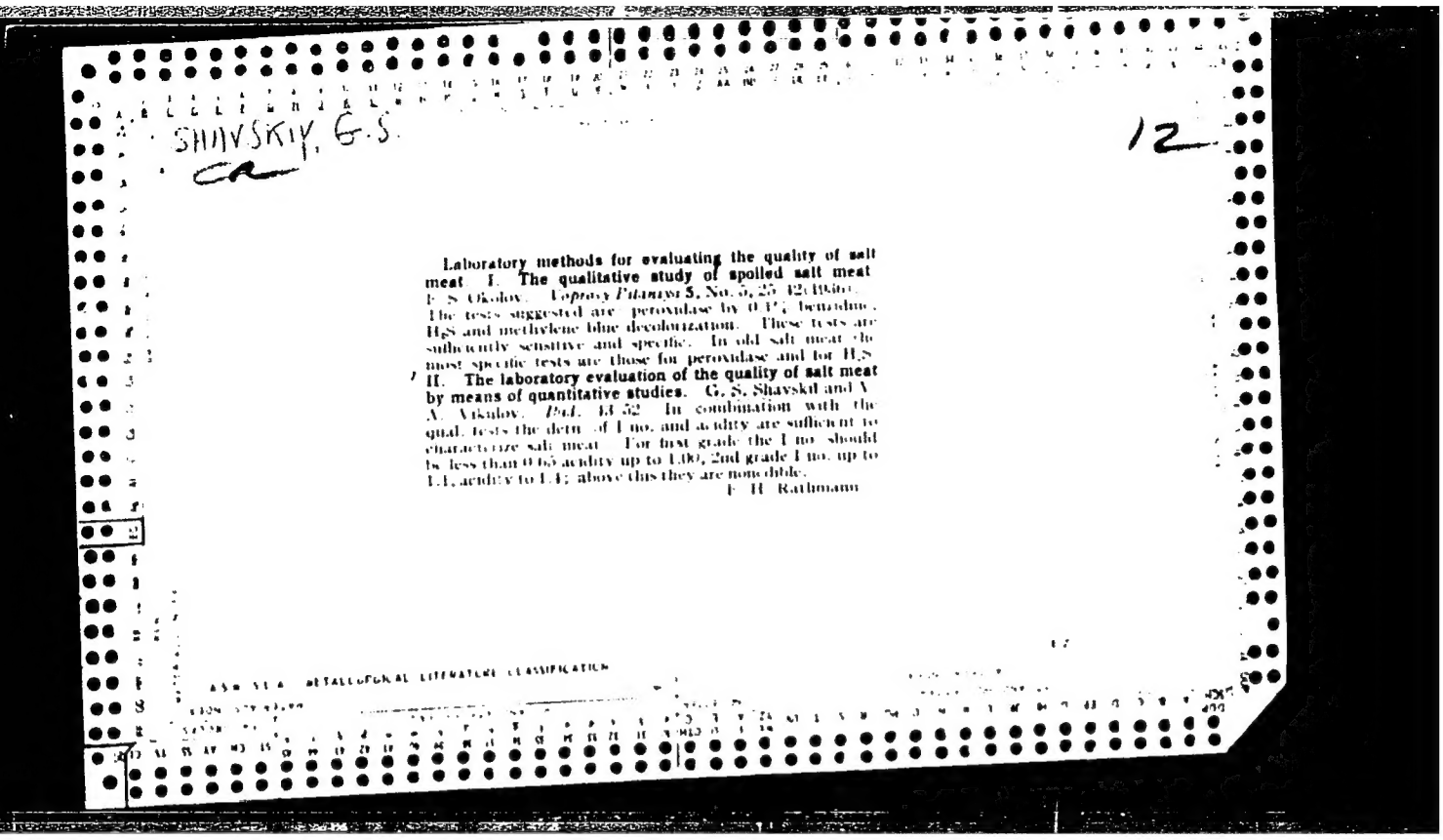




SHAVSHUKOVA, S.I.

Combined treatment of intracranial trauma in newborn infants. (MIRA 14:4)
Pediatriia 39 no.3:27-31 Mr '61.

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta okhrany materinstva i mladenchestva (dir. - kand.med.nauk R.A. Malysheva, nauchnyy rukovoditel' - dotsent R.Ye. Leyenson).
(BRSIN—WOUNDS AND INJURIES) (BIRTH INJURIES)

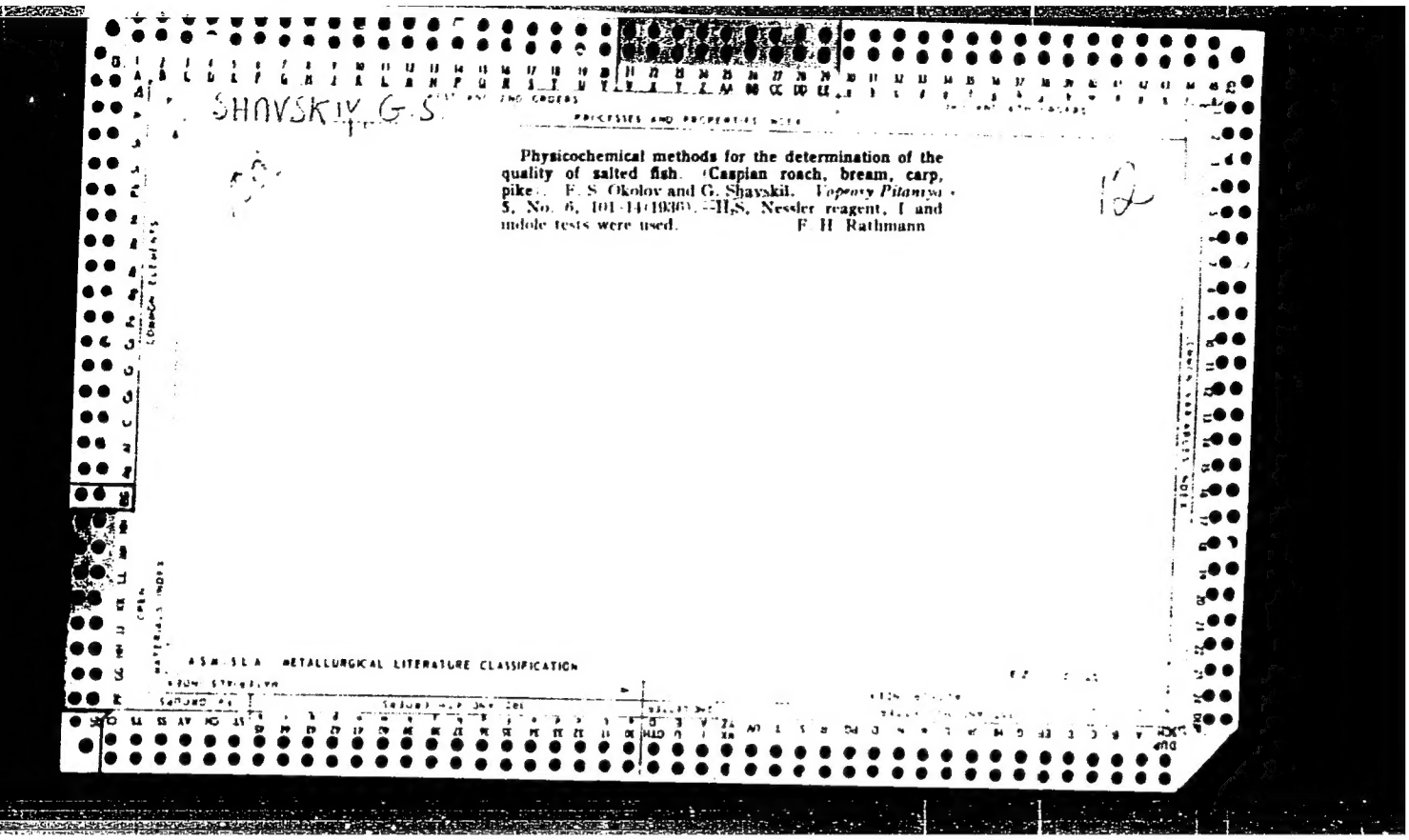


SHAVSKIY, G.S.

12

Laboratory methods for evaluating the quality of salt meat. I. The qualitative study of spoiled salt meat F. S. Okolov. *Veterinariya* **5**, No. 5, 25-42 (1928). The tests suggested are peroxidase by 0.1% benzidine, H_2S and methylene blue decolorization. These tests are sufficiently sensitive and specific. In old salt meat the most specific tests are those for peroxidase and for H_2S. **II. The laboratory evaluation of the quality of salt meat by means of quantitative studies.** G. S. Shavskil and V. A. Viskalov. *Ibid.* 43-52. In combination with the qual. tests the detn. of I no. and acidity are sufficient to characterize salt meat. For first grade the I no. should be less than 0.05 acidity up to 1.00, 2nd grade I no. up to 1.1, acidity to 1.4; above this they are nonedible. F. H. Rathmann

ASM STEEL METALLOGRAPHIC LITERATURE CLASSIFICATION



SHAVSKIY, G. S.

Physicochemical methods for the determination of the quality of salted fish. Caspian roach, bream, carp, pike. F. S. Okolov and G. Shavskii. *Voprosy Pitaniya* 5, No. 6, 101-14(1936). H_2S, Nessler reagent, I and indole tests were used. F. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SHAVSKIY, G. S.

3

V-1462. MECHANIZED CHEMICAL CLEANING OF TANKS. Taube, P.R., Rzhevskii, E.L. and Shavskii, G.S. (Neft. Khoz. (Oil Ind., Moscow), Oct. 1957, 55-58). An illustrated description is given of a scheme in which oil tanks are cleaned by water at 70-80°C sprayed from a monitor, which is raised and lowered from a trap door in the roof. UMES-TSh-1 emulsifier is added to the water. It consists of 2 kg of mustard powder (a waste product from mistard oil works) 3 kg of soap (for which waste products can be used) and 4 kg of solid industriol caustic. The emulsion separates on standing, so that the emulsifier can be used again. (L).

TAUBE, P.R.; TSVETKOVA, N.K.; SHAVSKIY, G.S.

Effect of aqueous mustard extracts on the properties of cleansing solutions. Izv. vys. uchob. zav.; pishch. tekh. no.3:69-72 '58. (MIRA 11:9)

1. Astrakhanskiy tekhnicheskiy institut rybnoy promyshlennosti i khozyaystva, Kafedra obshchey khimii.
(Cleaning compounds) (Mustard)

TAUBE, P.R.; TSVETKOVA, N.K.; SHAVSKIY, G.S.

Studying mustard cake. Izv.vys.ucheb.zav.; pishch.tekh. no.4: 30-33 '58. (MIRA 11:11)

1. Astrakhanskiy tekhnicheskiy institut rybnoy promyshlennosti, Kafedra obshchey khimii.

(Mustard oil) (Sinigrin)

TAUBE, P.R.; SHAVSKIY, G.S.

Using emulsions for cleaning barges. Izv.vys.ucheb.zav.; neft' i gaz. no.7:95-100 '58. (MIRA 11:11)

1. Astrakhanskiy tekhnicheskiy institut rybnoy promyshlennosti i khozyaystva.

(Tank vessels--Cleaning)

TAUBE, F.R., dots., kand.khim.nauk; SHAVSKIY, G.S., assistent

Emulsion cleaning of barges. Rech.transp. 17 no.10:45-46 O '58.
(MIRA 11:12)

1. Astrakhanskiy tekhnicheskiy institut rybnoy promyshlennosti.
(Barges--Cleaning)

TAUBE, P R., kand. khim. nauk; TSVETKOVA, M.K., kand. khim. nauk; SHAVSKIY, G.S.

Complete processing of oil cake for fuel. Maal.-zhir. prom. 24 no. 6:7 '58. (MIRA 11:7)

1. Asrybvtuz.

(Oil cake)
(Fuel)

L 35520-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-10 WW/RM
ACCESSION NR: AP5008199 S/0286/65/000/005/0070/0070

AUTHORS: Oster-Volkov, N. N.; Kamenskiy, I. V.; Itinskiy, V. I.; Shavskiy, G. S.; Okulin, V. S.

TITLE: A method for producing resins from furfuryl alcohol. Class 39, No. 168878

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 70

TOPIC TAGS: resin, alcohol

ABSTRACT: This Author Certificate presents a method for producing resins from furfuryl alcohol in the presence of small quantities of maleic anhydride. In order to increase the selection of resins with high thermal stability, the furfuryl alcohol is condensed with furhydrazine.

ASSOCIATION: none

SUBMITTED: 12Mar62 ENCL: 00 SUB CODE: MT, OC

NO REF SOV: 000 OTHER: 000

Card 1/1

L 35522-65 EWT(m)/EWP(j) Pc-4 RM

ACCESSION NR: AP5008201 S/0286/65/000/005/0071/0071

AUTHORS: Oster-Volkov, N. N.; Shavskiy, G. S.; Cheremukhin, I. K.; Pospirova, N. M.; Trofimova, G. M.

TITLE: A method for producing synthetic resin. Class 39, No. 168880

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 71

TOPIC TAGS: resin, synthetic material, maleic anhydride, alcohol, thermal stability

ABSTRACT: This Author/Certificate presents a method for producing synthetic resin from furfuryl alcohol in the presence of maleic anhydride by condensation. To obtain resin of high thermal stability, the furfuryl alcohol is condensed first with levulose in the presence of alkali, and maleic anhydride is then introduced into the reaction mixture.

ASSOCIATION: none

SUBMITTED: 25May62 ENCL: 00 SUB CODE: MT

NO REF SOV: 000 OTHER: 000

Card 1/1

L 41724-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-7 WW/RM
ACCESSION NR: AP5010913 UR/0286/65/000/007/0102/0102

AUTHORS: Oster-Volkov, N. N.; Shavskiy, G. S.; Cheremukhin, I. K.; Trofimova, G. M.

TITLE: A method for obtaining thermosetting resin. Class 39, No. 169779

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 102

TOPIC TAGS: resin, furyl alcohol, maleic anhydride, xylite

ABSTRACT: This Author Certificate presents a method for obtaining thermosetting resin based on furyl alcohol and maleic anhydride in the presence of alkali. To increase the thermochemical stability of resin, xylite is introduced into the basic condensate mixture.

ASSOCIATION: none

SUBMITTED: 21Oct63 ENCL: 00 SUB CODE: GC

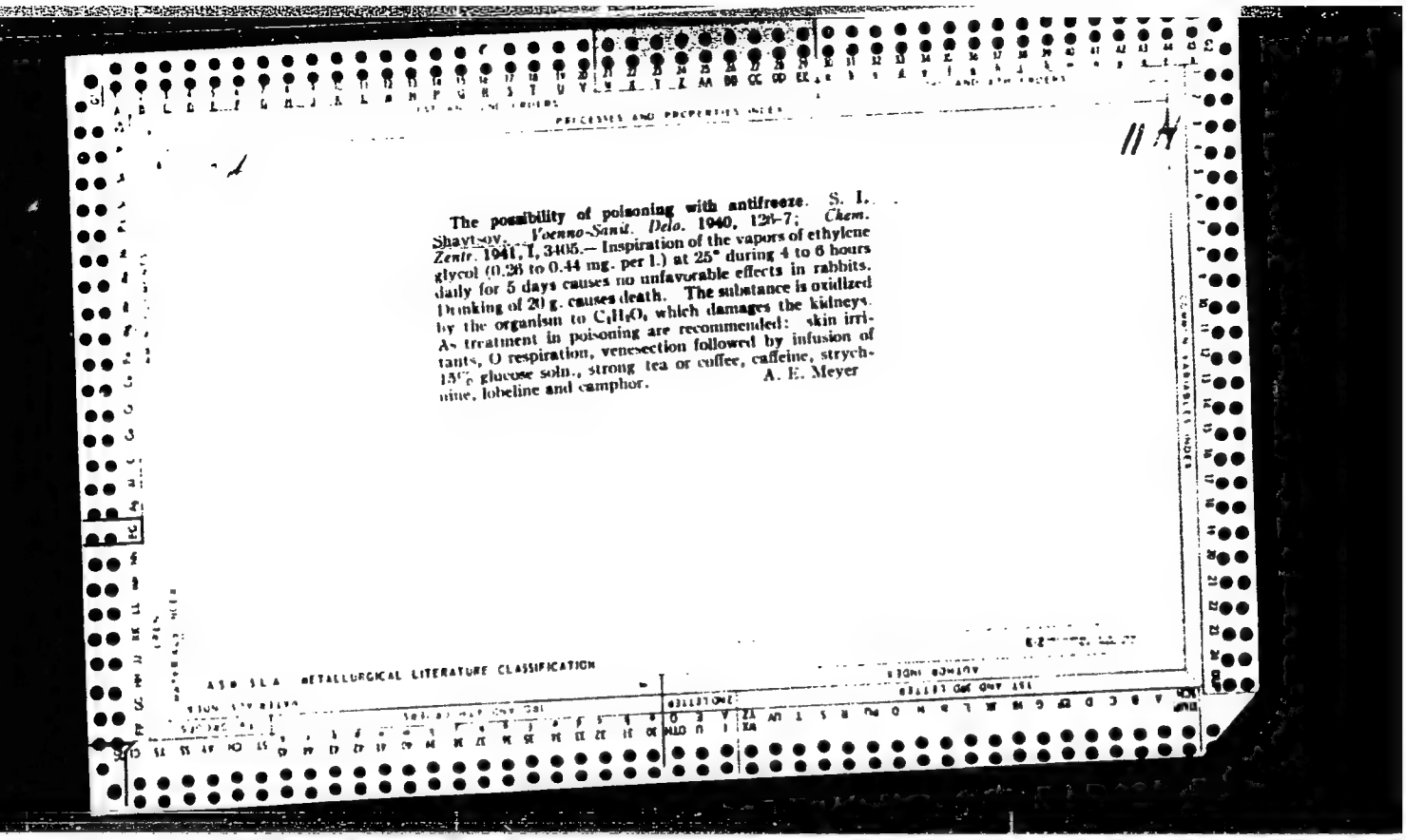
NO REF SOV: 000 OTHER: 000

Card 1/1

SHAVTALOV, L. YA.

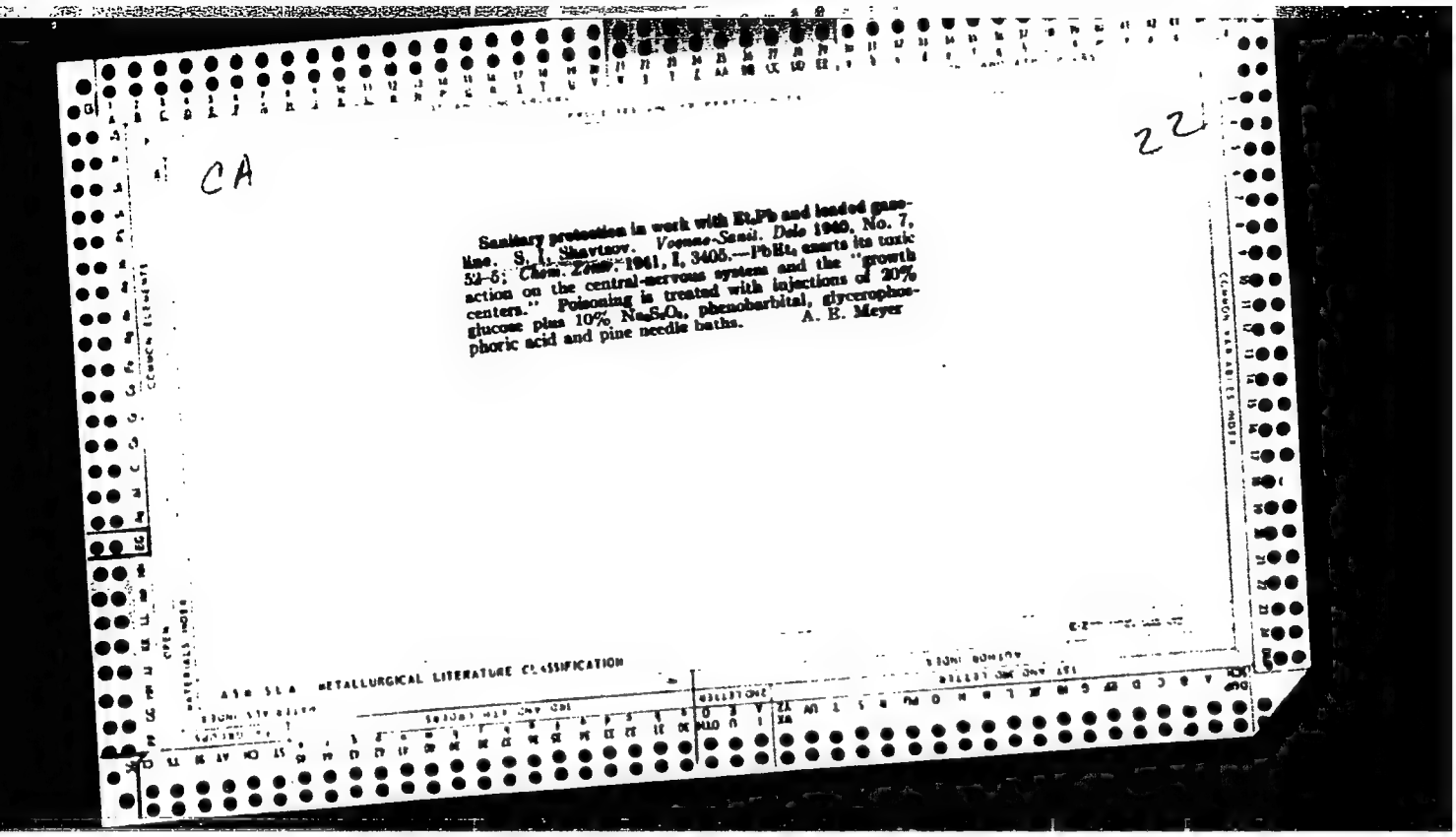
Study of Tb^{160} Emission. L.Ya. Shavtalov. Izvest. Akad. Nauk S.S.S.R. Ser. Fiz. 17, 503-5(1953) July-Aug. (In Russian)

The radioactivity of the long-lived (74d) isomer of Tb^{160} was studied. After plotting Fermi's graph, the author obtained values of the upper limits of partial spectra, which are shown in graphs. (J.S.R.



The possibility of poisoning with antifreeze. S. I. Shaytsov. *Voenno-Sanit. Delo.* 1940, 129–7; *Chem. Zentr.* 1941, I, 3405.— Inspiration of the vapors of ethylene glycol (0.26 to 0.44 mg. per l.) at 25° during 4 to 6 hours daily for 5 days causes no unfavorable effects in rabbits. Drinking of 20 g. causes death. The substance is oxidized by the organism to $C_2H_2O_4$, which damages the kidneys. As treatment in poisoning are recommended: skin irritants, O respiration, venesection followed by infusion of 15% glucose soln., strong tea or coffee, caffeine, strychnine, lobeline and camphor.

A. E. Meyer



CA

22

Sanitary protection in work with Et$_4$Pb and leaded gasoline. S. I. Shavtsov. *Voenno-Sanit. Delo* 1940, No. 7, 52–5; *Chem. Zentr.* 1941, I, 3405.—Et$_4$Pb exerts its toxic action on the central-nervous system and the "growth centers." Poisoning is treated with injections of 20% glucose plus 10% $Na_2S_2O_3$, phenobarbital, glycerophosphoric acid and pine needle baths. A. E. Meyer

CHAVTSOV, S.I.

The Rules For Prescribing, Receiving, Storing, Use, and Accounting of Medicines Containing Poisonous and Highly-Effective Substances
VOYENNO-MEDITSINSKIY ZHURNAL (Military Medical Journal), no. 2, February 1955, p.79

SHAVTSOV, S.I.,polkovnik med.sluzhby

History of the pharmacy in the Main Military Hospital. Voen.-med. zhur. no.11:90-91 N '57. (MIRA 11:4)
(MOSCOW--PHARMACY)

SHAVTSOV, S.I., polkovnik med.sluzhby

Method fo- calculating medical supply requirements. Voen.-med.zhur. no.7:21-25 Jl '58. (MIRA 12:12)

(MEDICINE, MILI"ARY AND NAVAL
med. property, method of determ. of requirements (Rus))

SHAVTSOV, S.I., polkovnik med. sluzhby.

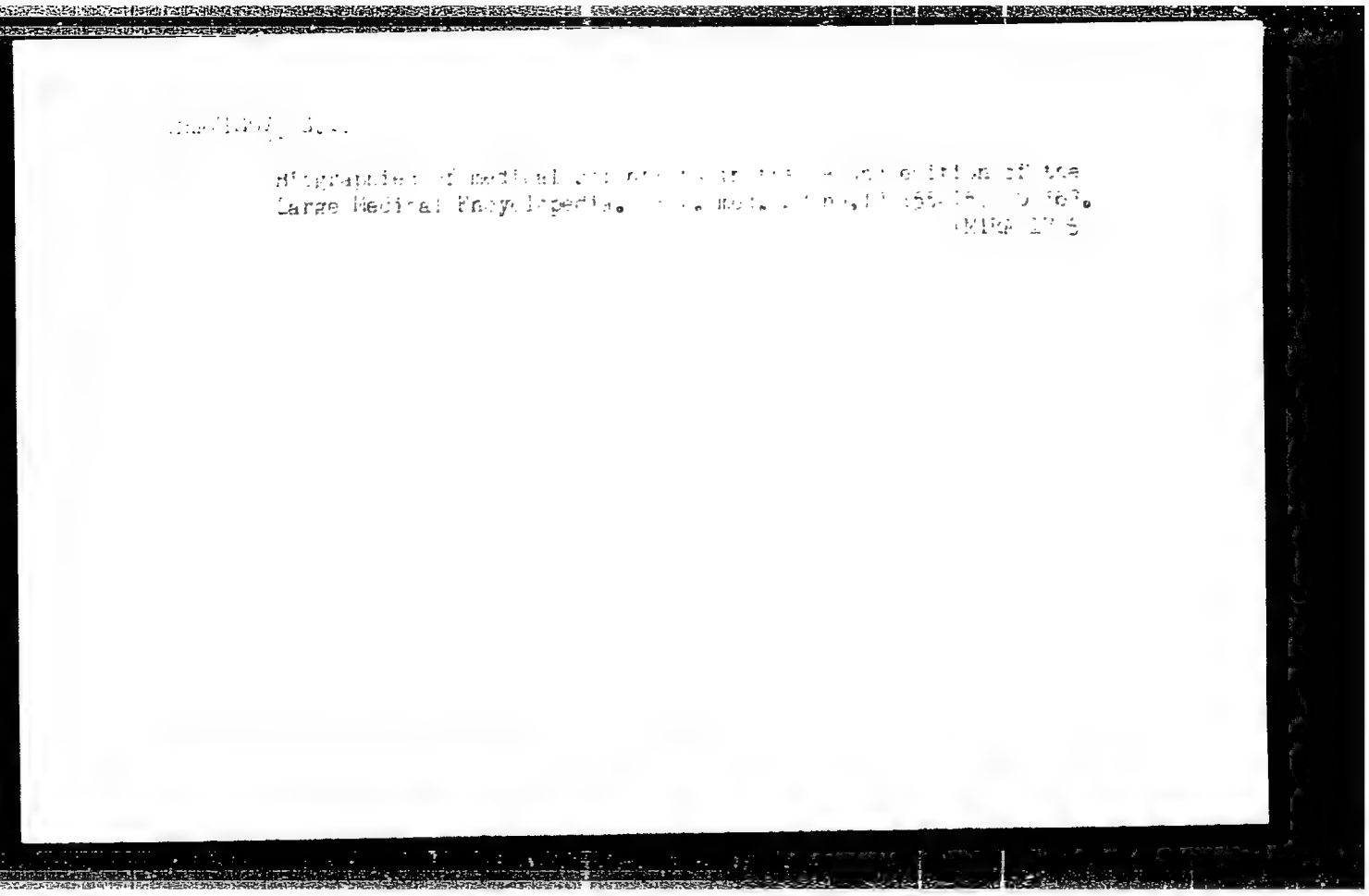
Two hundred fiftieth anniversary of the first Russian military hospital pharmacy, 1707-1957. Aptech.delo 7 no.2:69-74 Mr-Ap '58. (MIRA 11:4)
(MOSCOW--PHARMACY)

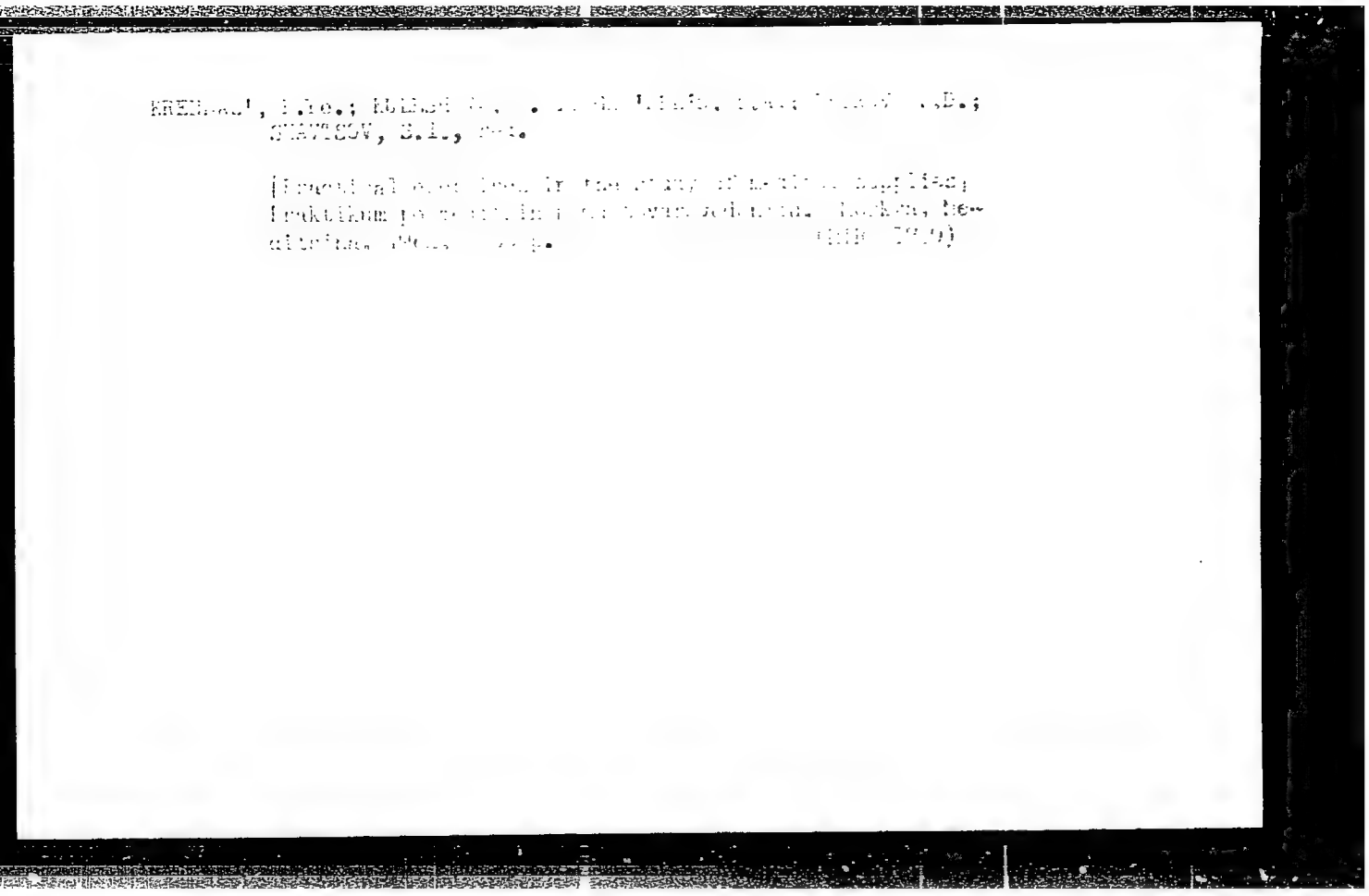
SHAVTSOV, S.I., polkovnik meditsinskoy sluzhby

Role of the Petersburg Medical and Surgical Academy in the training of military-pharmaceutic personnel; from the history of Russian military pharmacy. Voen.-med.zhur. no.8:82-84 Ag '59. (MIRA 12:12)
(MEDICINE MILITARY hist.)
(PHARMACY hist.)

SHAVTSOV, S.I., polkovnik meditsinskoy sluzhby

Letters to the editors. Klin.med. 40 no.10:146-148 O '62.
(MIRA 15:12)
(MELICINE--INTERNATIONAL COOPERATION)





17(8) SOV/177-58-7-4/28

AUTHOR: Shavtsov, S.I., Colonel of the Medical Corps

TITLE: The Problem of the Method of Calculating the Requirements for Medical Equipment

PERIODICAL: Voyenno-meditsinskiy zhurnal, 1958, Nr 7, pp 21-25 (USSR)

ABSTRACT: The author criticizes the former method of calculating the requirements for medical equipment. From 1938 on, the Military-Medical Academy and the Uchenyy meditsinskiy sovet pri nachal'nike Sanitarnogo upravleniya Krasnoy Armii (Scientific Medical Council attached to the Chief of the Medical Administration of the Red Army) have worked on this problem. At the second plenary session (December 1940), Professor M.P. Nikolayev talked about "Norms of Calculating the Requirements for Medical Equipment". On this occasion, the reduction of the nomenclature of medical equipment was discussed. During WW II a

Card 1/2

17(8) SOV/177-58-9-17/51

AUTHOR: Shavtsov, S.I., Colonel of the Medical Corps

TITLE: P.M. Zhuravlev - One of the Organizers of Medical Supply in the Army

PERIODICAL: Voyenno-meditsinskiy zhurnal, 1958, Nr 9, pp 60-62 (USSR)

ABSTRACT: The article is a short biography of military officer Petr Mironovich Zhuravlev who was one of the best organizers of medical supply in the Army. He was born in 1903 in Kiyev and was killed in action in 1943. He was well-known because of his famous discussions on problems of medical supply at the sessions of the Scientific Medical Council. He helped greatly in simplifying the medical field supply system.

Card 1/1

SHAVTSOV, S.I. (Moskva)

Errors in works dealing with the history of Russian pharmacy. Sov. zdrav. 18 no.8:30-35 '59. (MIRA 12:12)
(PHARMACY hist.)

SHAVTSOV, S.I. (Moskva)

Nikon Karpovich Karpinskii; on the 150th anniversary of his death. Vrach. delo no.8:145-146 Ag '61. (MIRA 15:3)
(KARPINSKII, NIKON KARPOVICH, 1745-1810)

SHAVTSOV, S.I.

Chronology of Russian pharmacopeias. Apt. delo 10 no.4:3-7 Jl-Ag '61. (MIRA 14:12)

(PHARMACOPEIAS)

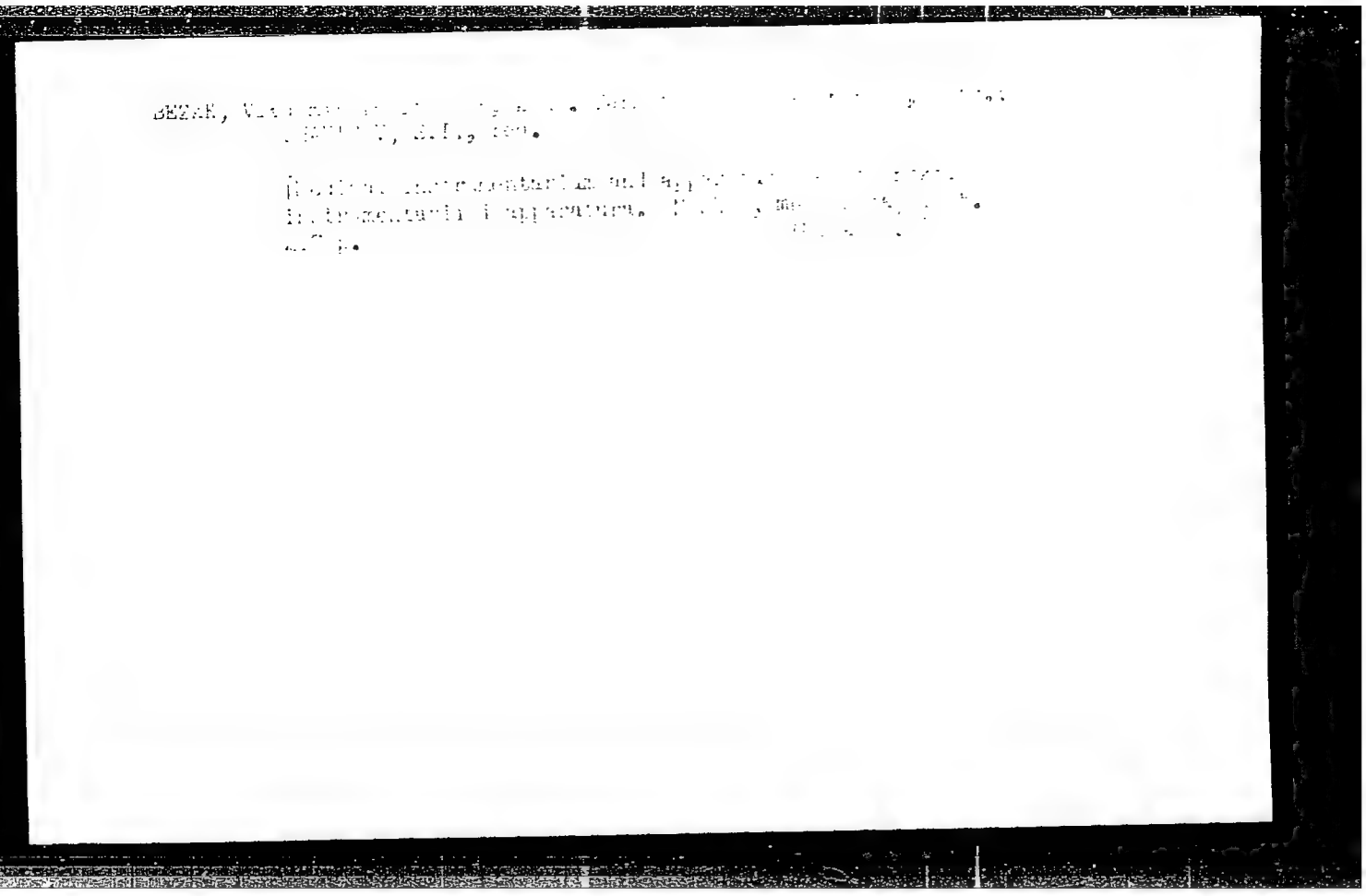
SHAVTSOV, S.I.

"Struggle of Russian physicians in the first half of the 19th century against the idealism and positivism of natural philosophy" by S.S. Vail'. Reviewed by S.I.Shavtsov. Sov.zdrav. 20 no.4:79-81 '61. (MIRA 14:5)

(MEDICINE--PHILOSOPHY) (VAIL', S.S.)

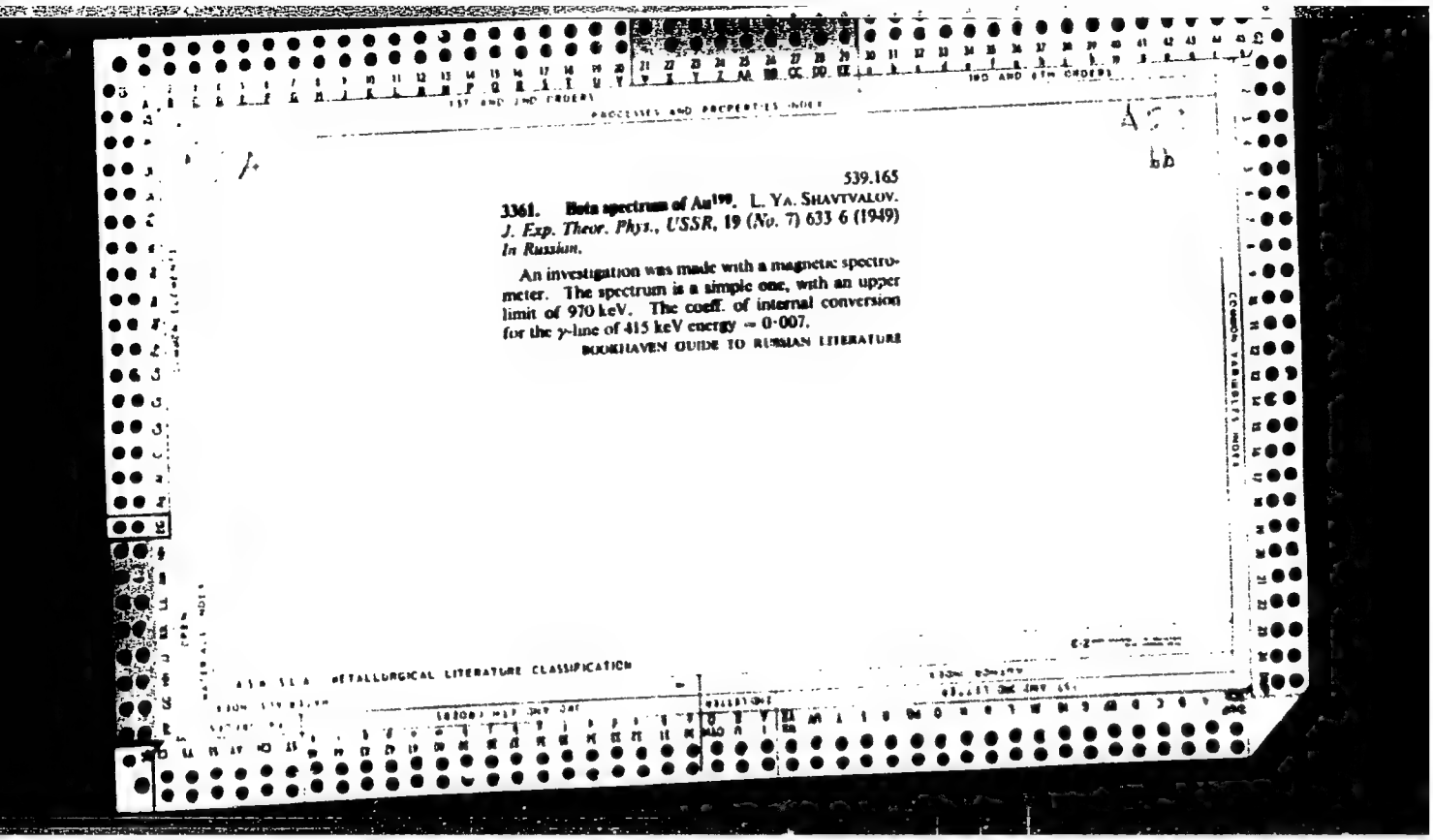
SHAVTSOV, S.I. (Moskva)

N.K.Karpinskii, notable Russian anatomist, surgeon and drug specialist.
Sov. zdrav. 21 no.6:80-84 '62. (MIRA 15:5)
(KARPINSKII, NIKON KARPOVICH, d.1812)



SHAVTSOV, S.'I.

"Storing drugs"; manual for pharmacies and pharmaceutical warehouses. I.I. Levinshtein, R.M.Lisitskii. Reviewed by S.M.Shavtsov. Apt.delo 4 no.3:59-60 My-Je '55. (MLRA 8:8)
(Drugs--Storage) (Levinshtein, I.I)



539.165

3361. Beta spectrum of Au^{198}. L. YA. SHAVTVALOV. *J. Exp. Theor. Phys., USSR*, 19 (*No.* 7) 633 6 (1949) *In Russian.*

An investigation was made with a magnetic spectrometer. The spectrum is a simple one, with an upper limit of 970 keV. The coeff. of internal conversion for the γ-line of 415 keV energy = 0·007.

BROOKHAVEN GUIDE TO RUSSIAN LITERATURE

Measurement of the partial β-spectrum of thorium by the coincidence method with the help of a double β-spectrometer. L. V. Grosbev and L. Ya. Shavtvalov (Moscow State Univ.). *Doklady Akad. Nauk S.S.S.R.* **68**, 257-60 (1949).—The double spectrometer is composed of a brass tube with an identical β-spectrometer with independent magnetic lenses on either side of the source. β-Counters are at both ends. Conversion electrons with $H\rho$ = 1385 oersted-cm. are focused on counter C_1. The magnetic lens of the other spectrometer is so adjusted that electrons of the various energies of the continuous spectrum fall on counter C_2. From the no. of β-β coincidences, the Fermi plot is calcd. for Th B and extrapolated to give 340 ± kv. for the max. energy. The complete spectrum for Th (B, C, and C″) is also given (cf. Feather, Kyles, and Pringle, *C.A.* **43**, 4109d). M. J. Sienko

SHAVTVALOV, L. YA.

1 RML

Measurement of the soft portion of the β-spectrum of radioactive thorium deposit. L. Ya. Shavtvalov. *Zhur. Eksptl. Teoret. Fiz.* 20, 684–7(1950). *C.A.* 44, 3298; cf. *C.A.* 44, 3371e.—The resolving power of the β-spectrometer used was increased by a nonhomogeneous magnetic field. Observation of the soft portion of the β-spectrum of Th (B + C + C') revealed 2 conversion lines of 40-e.kv. γ-quanta of the transition Th C → Th C' having energies of 24.7 and 36.3 e.kv. From β-γ coincidence measurements it is shown that the 24.7-e.kv. line does not arise exclusively from the γ-emission of Th C' but is also to be assigned to the Th C' → Th D transition. Th D also emits 40-e.kv. γ-quanta. M. G. Moore

USSR/Nuclear Physics - Radiation of Eu Oct 51

"Investigation of Radiation of $Eu^{152,154}$ by Means of Double Beta Spectrometer," L. Ya. Shavtalov, Moscow State U

"Zhur Eksper i Teoret Fiz" Vol XXI, No 10, pp 1123-1126

Discusses measurements of beta-gamma coincidences in $Eu^{152,154}$. Elementary beta-spectrum with 0.75 mev upper limit, approximating theoretical allowed transitions, was sepd from complex beta-spectrum of $Eu^{152,154}$. It was established that 336.4-keV gamma line is associated with beta decay of 0.75

LC 197T94

USSR/Nuclear Physics - Radiation of Eu Oct 51 (Contd)

mev max. No true coincidences of 122-keV gamma line with continuous beta spectrum was found, which indicates that 122-keV gamma line is rather associated with K-capture than with beta decay. Submitted 14 Oct 50.

LC 197T94

USSR/Physics - Superconductivity Nov 52

"Letters to the Editor"

"Zhur Eksper i Teoret Fiz" Vol 23, No 5, pp 609-612

A. I. Kostarev, "Remarks on Articles by A. I. Kostarev" (cf. "Zhur Eksper i Teoret Fiz," 19 and 20 (1950). N. Ye. Alekseyevskiy, Inst Phys Problems, Acad Sci USSR, "Superconductivity of Alloys of Bismuth With Rubidium and Cesium". L. Ya. Shavtvalov, Moscow State Univ, "Investigation of Gamma Radiation by means of Photoelectrodes."

236T88

SHAVTALOV, L. YA.

USSR/Nuclear Physics - Tb isomer Jul/Aug 53

"Study of Tb^{160} Emission," L. Ya Shavtalov

Iz Ak Nauk, Ser Fiz, Vol 17, No 4, pp 503-505

Studied radioactivity of long-lived (74d) isomer of Tb^{160}. After plotting Fermi's graph, author obtained values of upper limits of partial spectra, shown in graphs. Indebted to Ye. F. Klyukvina and Z. I. Lunik. Rec 9 Jul 53.

272T49

[illegible]

"[illegible] Study of the [illegible]mission of [illegible] [illegible]dioactive Isot[illegible]es by the Method of [illegible]eta-Gamma and Gamma-Gamma Coincidences." Cand Phys-Math Sci, Moscow State U, Moscow, 19[illegible]. ([illegible]Fiz, [illegible] 55)

SO: Sum. No. [illegible], [illegible] Jun 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

Investigation of terbium-160 radiation by the method of coincidences. I. P. Stepanenko and L. Ya. Shavtvalov. *Izvest. Akad. Nauk S.S.S.R., Ser. Fiz.* 19, 318-28(1955). Measurements were made with a γ-spectrometer contg. a NaI(Tl) crystal and a photomultiplier and with a magnetic β-spectrometer contg. a Geiger-Müller counter. The signals from the counter and the multiplier were electronically analyzed for β-γ coincidences. The spectrum consists of 2 components, 550 and 880 e.kv., which correlate with the hard γ-rays (870 and 960 e.kv.). There is a correlation between soft γ-rays (85 e.kv.) and the hard γ-rays. The results are in agreement with a decay scheme for Th^{160} proposed by Burson, *et al.* (*C.A.* 48, 6803*i*). S. Pakswer

AUTHORS: Vorob'yev, V. S., Shavtvalov, L. Ya. 057-4-22-7-4/26

TITLE: β-Spectra of Short-Lived Isotopes Al^{28} and P^{17} (β-spektry korotkozhivushchikh izotopov Al^{28} i P^{17})

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya Fizicheskaya, 1958, Vol. 22, No 7, pp. 799-799 (USSR)

ABSTRACT: The β- and γ-radiation of short lived isotopes (Refs 1-14) were subject to this investigation. A β-spectrometer with a magnetic lens and a γ-luminescence spectrometer was used. The isotopes were obtained by bombarding targets with deuterons of an energy of 4 MeV. The deuterons were accelerated in the cyclotron of the NIIYaF MGU and led out behind the shield into the chamber of the β-spectrometer. Al^{28}, which was obtained according to the (d, p)-reaction, was selected for investigation. The upper limit of the β-spectrum of Al^{28} equals 2820 ± 50 keV. Contrary to reference 16 the diagram was obtained with a straight curve. The half-life determined according to the variation of the intensity in the spectral range of 1100 keV amounted to 2.1 ± 0.1 minutes. The half-life determined from the γ-radiation amounted to 2.3 ± 0.1

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minutes. It is possible that a less intensive β-spectrum with an upper limit of ∼[illegible] exists. The half-life corresponding to this [illegible] was estimated on the β-spectrometer (at 3.[illegible] MeV) and furnished a value of $T_{1/2}$ = [illegible]±20 sec. The [illegible] of the [illegible] spectrum (if it exists at all) is not settled as yet. The β-spectrum of F^{17} was obtained from [illegible] [illegible] reaction with oxygen. The examination furnished an upper limit of [illegible] MeV. From ∼[illegible] keV onwards a noticeable deviation from the straight is observed in the Fermi-diagram. The half-life measured by means of the β-spectrometer (at [illegible] keV) of F^{17} amounted to [illegible]±5 sec. After the bombardment by deuterons was terminated no γ radiation [illegible] from the target was found. [illegible] Mokhov and Z. [illegible] Tikhomirova, and the cyclotron-staff: [illegible] Koshelyayev, A. [illegible] Danilov, [illegible] Knyazev assisted in the work. There are 5 figures and [illegible] references, [illegible] of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Scientific Research Institute of Nuclear Physics at the Moscow State University imeni M. V. Lomonosov)

Card 2/2

21(8)
AUTHORS: Vasil'yev, S. S., Shavtvalov L. Ya. SOV/56-36-1-47/62

TITLE: The β-Spectra of F^{20} and F^{17} (β-spektry F^{20} i F^{17})

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 1, pp 317-318 (USSR)

ABSTRACT: The β-spectrum of F^{20} was investigated by means of a β-spectrometer with a magnetic lens. The bundle of 4 Mev deuterons accelerated in the cyclotron of the NIIYaF MGU (Nauchnyy issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta = Scientific Research Institute for Nuclear Physics of Moscow State University) was introduced into the chamber of a β-spectrometer. The scheme of the experiment has already previously been described by the authors. As a target LiF ($\sim$0.4 mg/cm^2) was used. The spectrum recorded by the authors is a superposition of the β-spectrum of F^{20} (which was produced according to the reaction $F^{19}(d, p)F^{20}$) over the β-spectrum of Li^8 (produced according to the reaction Li^7 (d, p) Li^8). About half of the surface under the curve of

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the β-spectrum of Li^8 was below the upper boundary of the β-spectrum of F^{20}. The β-spectrum of F^{20} was determined by subtracting the β-spectrum of Li^8 from the β-spectra of Li^8 and F^{20} (apparently the sum of these spectra is meant). The second figure shows the Fermi diagram for F^{20}, which is rectilinear. The upper boundary of the β-spectrum of F^{20} is about (5.45 $\pm$ 0.05) Mev. Estimation of the half-life(which was carried out for the spectral range of about 1840 kev) resulted in the value (12.5 $\pm$ 2) sec. The results obtained by the present paper agree with those obtained by other authors. In the case of the irradiation of a thin target of LiF with deuterons, the relative number of radioactive nuclei of Li^8 and F^{20} in the target, and, consequently, also the relative intensity of their β-radiation in radioactive equilibrium are proportional to the ratio of the total cross section of the reactions Li^7 (d, p) Li^8 and F^{19} (d, p) F^{20}. For the ratio $\sigma(F^{19})/\sigma(Li^7)$ the value $\sim$1.5 was found at deuteron energies

of ~4 Mev. Besides, the β-spectrum of F^{17} (which was produced after the reaction O^{16} (d, n) F^{17}) was recorded. The target was a film of Celluloid $(C_6H_{10}O_5)_x$ having a thickness of ~0.5 mg/cm^2. Deviation from rectilinearity in the Fermi diagram of F^{17} begins at about 800 kev, i. e. approximately at the same energy as if lead oxide targets were used. Therefore, deviation from the straight line in the Fermi diagram of F^{17} is apparently not connected with the scattering of positrons in the target. Also the β-spectrum of F^{17} is probably a superposition of two partial spectra, and also in this case decay probably leads to the excited level of 880 kev existing in the nucleus. This assumption, however, must yet be experimentally confirmed. The authors thank Yu. M. Shirokov for useful discussions, B. M. Makuni and Z. I. Tikhomirova for their assistance, and they also express their gratitude to the cyclotron team, especially to G. V. Koshelyayev, A. A. Danilov, V. P. Khlapov, and A. P. Ozyabkin. There are 2 figures and 9 references, 1 of which is Soviet.

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VASIL'YEV, S.S.; SHAVTVALOV, L.Ya.

β^+ -spectrum of Si^{27}. Zhur.eksp.i teor.fiz. 39 no.5:1221-1223 N '60. (MIRA 14:4)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.

(Silicon—Spectra)

VASIL'YEV, S.S.; NO SEN CHAN; SHAVTVALEV, L.Ya.

Study of Mn^{56} radiation. Izv. AN SSSR. Ser. fiz. 25 no.9:1115-1116 '61. (MIRA 14:8)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(Manganese--Isotopes)
(Radiation)

VASIL'YEV, S.S.; NON SEN CHAN; SHAVTVALOV, L.Ya.

Investigating the radiation from Zn^{63}. Zhur. eksp. i teor. fiz. 40 no.2:475-476 F '61. (MIRA 14:7)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.
(Zinc—Istopes) (Radiation)

BASKOVA, K.A.; VASIL'YEV, S.S.; NO SEN CHAN; SHAVTVALOV, L.Ya.

Decay scheme of Br^{75}. Zhur. eksp. i teor. fiz. 41 no.5:1484-1486 N '61. (MIRA 14:12)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.

(Bromine--Decay)

S/056/62/042/002/018/055
B102/B138

AUTHORS: Baskova, K. A., Vasil'yev, S. S., No Seng Ch'ang, Shavtvalov, L. Ya.

TITLE: Investigation of some radioactive nuclei in the range of filled $1f_{7/2}$ shells

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 2, 1962, 416-426

TEXT: A magnetic thin-lens β-spectrometer and a scintillation γ-spectrometer were used to investigate the radiation emitted by Ni^{65}, Co^{55}, Mn^{51}, V^{47}, and Se^{83} nuclei. These isotopes were produced by proton or deuteron irradiation of enriched targets in the cyclotron of the NIIYaF MGU. The following results were obtained: 2.5-hr Ni^{65} was produced in the reaction $Ni^{64}(d,p)Ni^{65}$. In the Ni^{65} spectrum three partial β^--transitions with 2120 ± 40, 1050 and 620 kev end-point energies (intensities 57, 14 and 29%) and 370, 1120, 1490, 1630 and 1720 kev γ-transitions were observed. $\beta\gamma$-coincidences were observed at 1490 kev and 1120 kev gamma energies.

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Investigation of some radioactive ...

18-hr Co^{55} was produced in the reaction $Fe^{54}(d,n)Co^{55}$; the end-point energies of the three β^+-spectrum components were 1500 ± 30, 1040 and 550 kev (56, 41, 3%), gamma lines were observed at 940, 1410, 1800 and 2180 kev. The β^+-transition with the end-point energy 1500 kev takes place to an excited level with subsequent emission of 940-kev gamma rays. β^- coincidence was observed for 1410 and 940 gamma quanta, the end-point energy of the β^+ particles was 1040 kev. The 44-min Mn^{51} was obtained from $Cr^{50}(d,n)Mn^{51}$ reactions. The end-point energy of the two β^+ spectrum components are at 600 and at 2170 ± 60 kev, in the γ-spectrum hitherto unknown lines were observed at 1560 and 2030 kev, with a half-life of 50 ± 10 min. The 1560-kev transition is assumed to follow the 600-kev β^+ decay, the 1569 and 2030-kev levels belong to the reaction $V^{51}(p,n)Cr^{51}$. The 33-min V^{47} isotope was obtained from $Ti^{47}(p,n)V^{47}$. It is shown a simple β^+ spectrum with an end-point energy of 1890 ± 30 kev, gamma lines were observed at 1800 and 2160 kev, the latter unknown up to now. The 25-min Se^{83} was produced by a (d,p) reaction from Se^{82}. Three β^+ components were found with 1.0, 1.8 and 3.3 Mev end-point energies

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Investigation of some radioactive ...

(58, 40, ~ 2%); the latter is a new. Gamma transitions were recorded at 220, 355, 530, 780, 1060, 1300, 1480, 1850 and 2300 kev. Only those with 220, 355, 1850 and 2300 kev belonged to the 25-min activity, the others to Br^{82}. The results are discussed on the assumption that one group of the odd nuclei investigated had one nucleon outside the filled $1f_{7/2}$ shell, and in the other group one nucleon is deficient to fill this shell. Nuclei with 29 p or n have similar excited levels at ~600, 1000 and 1400 kev, those with 27 p or n only at ~1400 kev. The excitation energy decreases with increasing number of even p and increases with the number of even n. The configurations of the ~1400-kev levels will be $(1f_{7/2})^{-1}(2p_{3/2})^{2}$ for Z(N) = 29 and $(1f_{7/2})^{-2}(2p_{3/2})^{1}$ for Z(N) = 27.

Yu. A. Vorob'yev, V. S. Zazulin, A. A. Vasil'yev, and I. Ya. Ushakov are thanked for help. There are 16 figures, 1 table, and 22 references: 2 Soviet and 20 non-Soviet. The four most recent references to English-language publications read as follows: L. H. Th. Rietjens et al. Phys. Rev. 120, 527, 1960; M. K. Ramaswamy et al. Proc. Intern. Conf. Nucl. Struc. Canada, 1960, p. 963. R. W. Bauer, M. Deutsch. Nucl. Phys. 16, 264,

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S/056/62/042/002/018/055
B102/B138

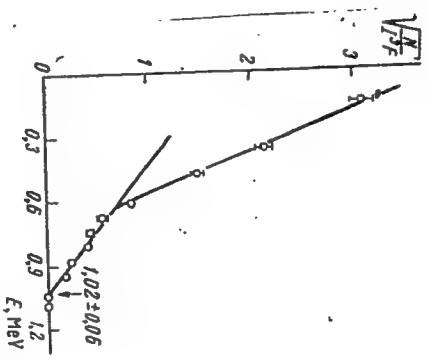
Investigation of some radioactive ...

1960; M. Nozawa et al. J. Phys. Soc. Japan, 15, 2137, 1960.

ASSOCIATION: Institut yaderncy fiziki Moskovskogo gosudarstvennogo universiteta (Institute of Nuclear Physics of Moscow State University)

SUBMITTED: September 23, 1961

Fig. 13



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S/048/62/026/012/009/016
B117/B102

AUTHORS: Vasil'yev, S. S., and Shavtvalov, L. Ya.

TITLE: Investigation of the radiation of F^{17}, P^{30}, Cl^{33} and Br^{78}

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 12, 1962, 1495 - 1497

TEXT: The β^+-spectra of the above short-lived nuclei were investigated using a magnetic β-spectrometer. P^{30} was obtained from the following reactions: $S^{32}(d,\alpha)P^{30}$, $Al^{27}(\alpha,n)P^{30}$ and $Si^{29}(d,n)P^{30}$. All Fermi plots of its β^+-spectra showed a second component: With P^{30} obtained from $S^{32}(d,\alpha)$ the fundamental spectrum (upper limit 3.24±0.04 Mev) was superimposed by another spectrum having an upper limit of 4.8±0.2 Mev. This could be assigned to Cl^{33} from $S^{32}(d,n)Cl^{33}$. For bombardment with 13.3 Mev deuterons the ratio of the total cross sections of $S^{32}(d,\alpha)P^{30}$ and $S^{32}(d,n)Cl^{33}$ were assumed to be 2.8±0.5. With P^{30} from $Al^{27}(\alpha,n)$ a second non-identi-

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Investigation of the radiation ...

fied spectrum was observed having its upper limit at ~1.3 Mev and its relative intensity <10%. With P^{30} obtained from $Si^{29}(d,n)$ the upper limit of the second spectrum lay at ~1.7 Mev. The formation of this can apparantly be attributed to the use of SiO_2, inducing the reaction $O^{16}(d,n)F^{17}$. The ratio between the cross sections of $O^{16}(d,n)F^{17}$ and $Si^{29}(d,n)P^{30}$ was found to be 2.7±0.5. The averaged upper limit of the β^+-spectrum for P^{30} was E = 3.27±0.05 Mev and the mean half-life 2.5±0.1 min. F^{17} was obtained from the reaction $O^{16}(d,n)F^{17}$ which took place in a $Ti^{44}O_2$ target. The Fermi curve of the β^+-spectrum of F^{17} was linear up to 150 kev. The upper limit of the spectrum lay at 1.73±0.03 Mev. The F^{17} half-life was 70±8 sec. Br^{78} was obtained from the reaction $Se^{77}(d,n)Br^{78}$. Its β^+-spectrum consists of two components with their upper limits at 2.5±0.1 and 1.2±0.2 Mev and their relative intensities 90 and 10. The value 2.5 Mev shows that the upper limit was determined from the mass difference of Br^{78} and Se^{78}. The component with E = 1.2 Mev seems to belong entirely to Br^{78}. β-transitions

S/048/62/026/012/009/016
B117/B102

Investigation of the radiation ...

with E = 1.2 Mev must take place to the 1310-kev level. The Br^{78} half-life was 6.4±0.4 min. This paper was presented at the 12 Annual Conference on Nuclear Spectroscopy in Leningrad from January 26 to February 2, 1962. There are 5 figures.

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VASIL'YEV, S.S.; SHAVTVALOV, L.Ya.

Gamma radiations from Au^{197*} and the β^+-spectrum of O^{15}.
Izv. AN SSSR. Ser. fiz. 27 no.10:1261-1262 O '63. (MIRA 16:10)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.

BASKOVA, K.A.; VASIL'YEV, S.S., KHAMO-LEYLA, M.A.; SHAVTVALOV, L.Ya.

Radiations from W^{187} and $Tl^{200}W^{187}$ (T = 24 hrs).
Izv. AN SSSR. Ser. fiz. 27 no.10:1258-1260 O '63.
(MIRA 16:10)

VASIL'YEV, S.S.; SHAVTVALOV, L.Ya.

Radiation from Al^{26m}, S^{31}, Ti^{43}, and Mn^{57}. Zhur. eksp. i teor. fiz. 45 no.5:1385-1386 N '63. (MIRA 17:1)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.

[illegible]EV, S. S.; KHANAAZHAV, L. T.; DZHORDZH, E. T.; SHAVTVALOV, L. Ya.

"The Investigation of the Spectra of Ne^{19} and Ge^{67} and also the Gamma Radiation of Au^{197m}."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

NIIYaF, MGU
Sci Res Inst Nuclear Physics, Moscow State Univ.

LAZAREVA, K. A.; VASIL'YEV, S. S.; KHAMO-L[illegible]. A.; SHAVTVALOV, L. Ya.

"Investigation of the Radiations of Radioactive Isotopes Sc^{43}, Cr^{49}, Ga^{66}, Ge^{67}, and Sb^{117}."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

NIIYaF, MGU (Sci Res Inst Nuclear Physics, Moscow State Univ)

BASKOVA, K.A.; VASIL'YEV, S.S.; KHAMO-LEYLA, M.A.; SHAVTVALOV, L.Ya.

Study on β^- and β^+-radiation from Sc^{43} and Sb^{117}. Zhur eksp. i teor. fiz. 47 no.3:1162-1164 S '64. (MIRA 17:11)

L 11016-65 EWT(m) DIAAP/SSD

ACCESSION NR: AP4046438 S/0056/64/047/003/1162/1164

AUTHORS: Baskova, K. A.; Vasil'yev, S. S.; Kh:mo-Leyla, M. A.; Shaytvalov, L. Ya. (6)

TITLE: Investigation of Beta and Gamma Radiation from Sc-43 and Sb-117 19 19

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 3, 1964, 1162-1164

TOPIC TAGS: scandium, antimony, beta radiation, gamma radiation, beta spectrum, gamma spectrum, beta gamma correlation

ABSTRACT: The β spectra of the two isotopes were determined with a magnetic-lens β spectrometer described by the authors previously (ZhETF v. 42, 416, 1962). The γ spectrum was measured in a scintillation γ spectrometer with a 100-channel pulse-height analyzer. The β spectrum of Sc^{43} showed the presence of three partial β spectra

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L 11016-65
ACCESSION NR: AP4046438

2

with end point energies 1220 ± 40 keV (67%), 820 keV (26%), and 450 keV (7%). The γ spectrum showed easily resolved lines with energies 219, 370, 620, and 960 keV with corresponding intensities 1.0, 2.0, 0.5, and 0.1 relative to the annihilation line intensity (taken equal to 100). β–γ coincidences were measured for Sc^{43} with a β spectrometer connected in coincidence with a single-channel scintillation spectrometer and gave end point values which agreed well with the end point values 820 ± 40 and 500 ± 40 keV, which agreed well with the values of the end point energies determined by the composition of the partial β^+ spectra. In the case of Sb^{117}, the β spectrum proved to be simple with an end point energy 570 ± ± 40 keV, in agreement with the only published data. The γ spectrum contains a single 160-keV line, whose intensity referred to a single γ particle is 44.4. The β–γ coincidences, measured with apparatus described in the cited reference by the authors, also confirmed earlier published results by McGinnis (Phys. Rev. v. 97, 93, 1955).
"The authors thank Yu. A. Vorob'yev, V. S. Zazulin, and N. S.

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L 11016-65
ACCESSION NR: AP4046438

Kirichev for help with the work." Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 10Mar64 ENCL: 00

SUB CODE: MP NR REF SOV: 002 OTHER: 008

Card 3/3

L 11017-65 EWT(m) DIAAP/SSD/AFWL/ESD(gs)

ACCESSION NR: AP4046439 S/0056/64/047/003/1164/1167

AUTHORS: Vasil'yev, S. S.; Dzhorzh, E. T.; Shavtvalov, L. Ya. (B)

TITLE: Investigation of Beta+ spectra of Ne^{19}, Ge^{67}, and Sb^{118}, and of Gamma radiation produced by bombarding Au-197 with Alpha particles

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 3, 1964, 1164-1167

TOPIC TAGS: neon, germanium, antimony, gold, beta spectrum, gamma radiation, alpha particle scattering

ABSTRACT: The apparatus and the procedure used for the investigations were described elsewhere (Vasil'yev et al., Izv. AN SSSR ser. fiz. v. 22, 7, 1958 and v. 26, 1495, 1962; ZhETF v. 36, 317, 1959, v. 39, 1221, 1960, and v. 45, 1385, 1963). The end-point energies obtained for the β spectra of Ne^{19}, Ge^{67}, and Sb^{118} were 2.2 ± 0.03

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L 11017-65
ACCESSION NR: AP4046439 7

MeV, 2.96 ± 0.05 MeV, and a set of partial-spectrum end points 700 keV (5.3%), 2200 keV (53.7%), 3000 keV (25.4%) and 4000 keV (15.6%). The corresponding half-lives were 16.5 ± 1 sec, 21 ± 1 min, and, in the case of Sb, 3.7 ± 0.3 min for the positron energies 315 and 2000 keV, and 4.3 ± 0.2 min for a positron energy 3152 keV. The data are compared with the results by others. The γ radiation arising in the bombardment of gold by α particles was investigated and the resultant conversion spectrum is shown in Fig. 1 of the enclosure. "We thank Yu. A. Vorob'yev, V. S. Zazulin, N. S. Kirpichev, V. I. Plesskaya, V. M. Makuni, and T. N. Trapeznikova for assistance in this work." Orig. art. has: 2 figures and 1 formula.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Nuclear Physics Institute, Moscow State University)

SUBMITTED: 20Apr64 ENCL: 01

SUB CODE: NP NR REF SOV: 003 OTHER: 016

Card 2/3

L 11017-65

ACCESSION NR: AP4046439

ENCLOSURE: 01

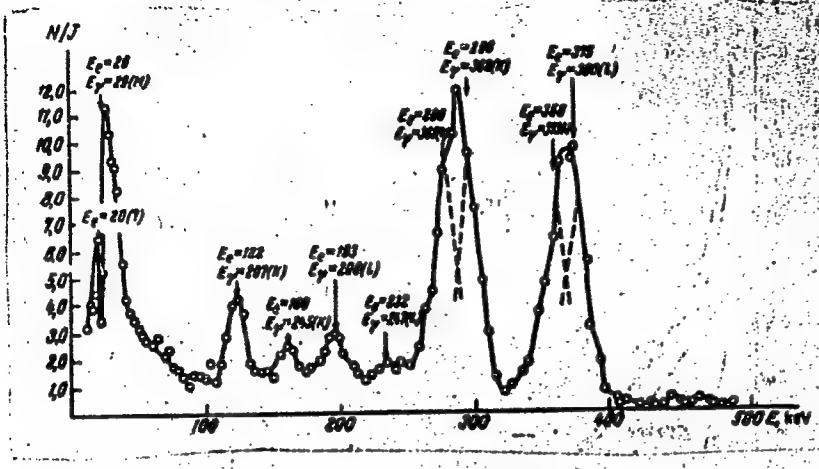

Fig. 1. Conversion spectrum of Au^{197} bombarded with alpha particles

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L 33614-65 EWT(m)/EWP(b)/EWP(t) Peb DIAAP/IJP(c) JD/JG

ACCESSION NR: AP5005940 S/0048/65/029/002/0200/0209

AUTHOR: Baskova, K.A.; Vasil'yev, S.S.; Khamo-Leyla, M.A.; Shavtvalov, L.Ya.

TITLE: Radiations from $^{49}_{19}Cr$, $^{69}_{19}Ge$ and $^{68}_{13}Ga$ /Report, 14th Annual Conference on Nuclear Spectroscopy held in Tbilisi, 14-22 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.29, no.2, 1965, 200-209

TOPIC TAGS: beta spectrum, positron decay, gamma ray spectrum, coincidence counting, odd even nucleus, odd odd nucleus, chromium, germanium, gallium

ABSTRACT: The positron and gamma spectra of Cr^{49}, Ge^{69} and Ga^{68} were investigated in order to obtain further information concerning the decay schemes of odd nuclei in which a proton becomes an even neutron as the result of positron decay, and to extend to a larger number of nuclei the linear relation found by F.Everling (Nucl. Phys.36,228,1962) between mass number and decay energy for similar transitions. The investigated isotopes were obtained by bombarding suitably enriched targets with deuterons or alpha particles from the cyclotron of the Nuclear Physics Scientific Research Institute at Moscow State University. The β spectra were observed with a thin lens magnetic spectrometer, and the γ spectra with a scintillation

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ACCESSION NR: AP5005940

counter and a 100-channel pulse analyzer. For β-γ coincidence measurements a single-channel γ spectrometer was used. The apparatus has been described elsewhere in more detail by some of the present authors and others (Izv.AN SSSR,Ser.fiz.25,1115,1961; Zhur.eksp.i teor.fiz.41,1481,1961; 42,416,1962). All three β spectra were found to be complex. The Cr^{49} β spectrum contained three components, including a weak (6%) component with end-point energy 800 keV concerning which contradictory findings have been reported. Five γ lines were observed, of which one at 850 keV is new and one at 620 keV has been controversial. The β spectra of Ge^{69} and Ga^{68} had two components each, in agreement with findings of other authors. A new 1600 keV γ ray was found in the Ga^{68} spectrum, and a previously reported 2320 keV γ ray was not confirmed. Coincidences between various β components and γ rays were observed and these are discussed in detail with respect to the level diagrams and decay schemes. Attempts to determine the ground state spins and parities of the investigated nuclides from Everling plots (ref.cit.) were not successful, partly because of distortion of the linear relation by the effects of subshell completion, and partly because of insufficient data concerning neighboring nuclei. It was only possible to conclude that if the ground state of Ge^{69} is odd with spin $5/2^-$,as is expected on the basis of the shell model, the ground state spin and parity of Ge^{67} must also be $5/2^-$. "The authors express their gratitude to Yu.A.Vorob'yev, V.S.

L 33614-65
ACCESSION NR: AP5005940

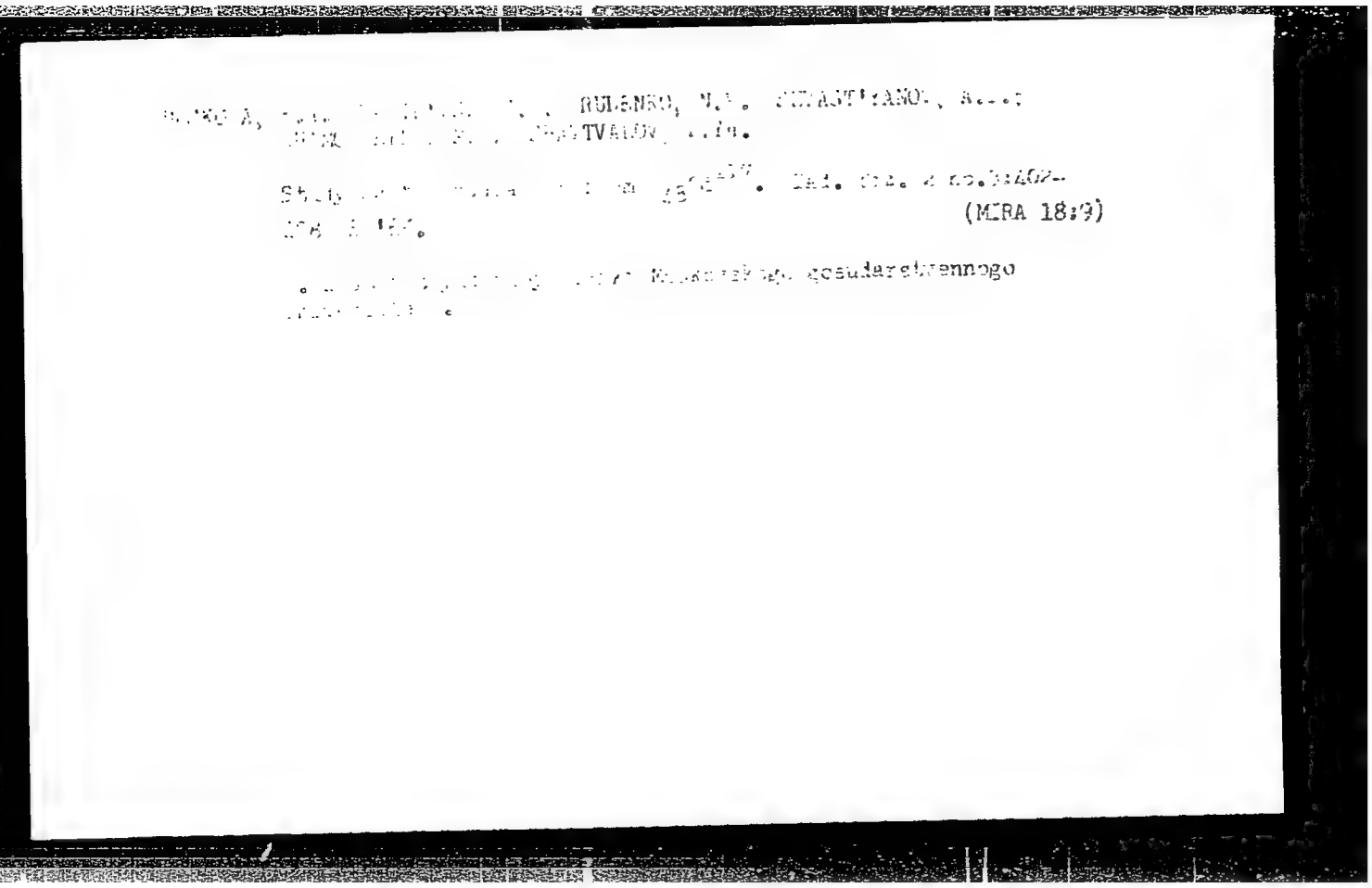
Zazulin and N.S.Kirpichev for assistance in the work." Orig.art.has: 12 figures and 2 tables.

ASSOCIATION: none

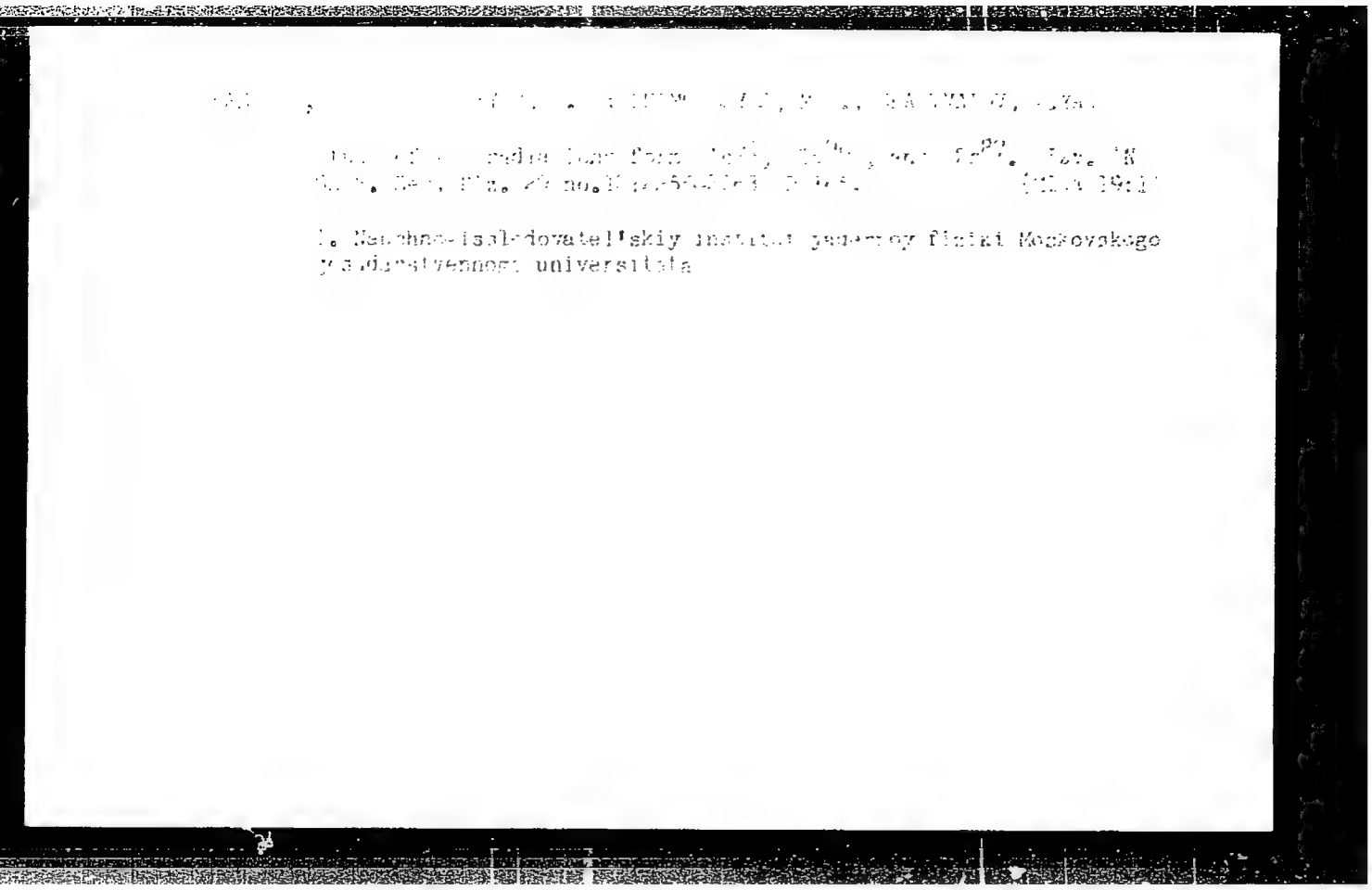
SUBMITTED: 00 ENCL: 00 SUB CODE: NP

NR REF SOV: 001 OTHER: 019

Card 3/3



(MIRA 18:9)



L 15177-66 EWT(m) DIAAP

ACC NR: AP6001143 SOURCE CODE: UR/0367/65/002/003/0402/0408

AUTHOR: Baskova, K. A.; Vasil'yev, S. S.; Rudenko, N. P.; Sevast'yanov, A. I.; Khamo-Leyla, M. A.; Shavtvalov, L. Ya.

ORG: Institute of Nuclear Physics, Moscow State University (Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta)

TITLE: Investigation of the radiation of $_{48}Cd^{117}$

SOURCE: Yadernaya fizika, v. 2, no. 3, 1965, 402-408

TOPIC TAGS: cadmium, beta spectrum, half life, isotope separation, indium

ABSTRACT: Cd^{117} was obtained from the reaction Cd^{116} (d,p). As a result of the investigations conducted it is shown that the half-life of Cd^{117} is about three hours. The half-life of 50 min previously ascribed erroneously to Cd^{117} is, apparently, that of In^{116} obtained from the reaction Cd^{116} (d, 2n). The beta-spectrum of Cd^{117} (3 hr) was investigated on a beta-spectrometer with a magnetic lens. The upper boundaries of the partial beta-spectra have the energy of 670; 1290; 1800; and 2200 kev. The value of log ft proved to be equal to 4.9; 6.7; 6.9; and 7.6, respectively. The results presented, as well as the investigations of the $\beta\gamma$-coincidences made it possible to construct a decay scheme of Cd^{117} which differs substantially from that in the literature. Authors express their gratitude to Yu. A. Vorob'yev, V. S. Zazulin, N. S. Kirnichev, and M. R. Akhmed for assistance in the work. Orig. art. has: 7 figures and 1 table.

Card 1/1 SUB CODE: 20, 18 / SUBM DATE: 19Feb65 / ORIG REF: 001 / OTH REF: 012

SHAVVA, K.I.; DRUZHININ, I.P.

Determination of specific costs of compensating for a power deficit in a system. I.AN Kir.SSR.Ser.est.i tekh.nauk 2 no.7:115-135 '60. (MIRA 14:4)

(Electric power production--Costs)

SHAVVA, K.I., inzh. (g.Frunze)

A new textbook of the economic aspects of water management ("Economics of water management" by D.T. Zuzik. Reviewed by K.I. Shavva). Gidr. i mel. 12 no. 12:60 D '60. (MIRA 14:1)

(Water resources development--Economic aspects)
(Zuzik, D.T.)

SHAVVA, K. I.

Methods for determining the estimated optimum supply of irrigation sources in uncontrolled flow. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 4 no.1:51-73 '62. (MIRA 15:10)

1. Laboratoriya gidroenergetiki AN Kirgizskoy SSR (rukovoditel' kand. tekhn. nauk I. P. Druzhinin).

(Irrigation)

SHAVVA, K.I.

Method of determining the maximum economically justified capacity of irrigation systems under conditions of unregulated streamflow. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 4 no.10:87-98 '62.

Approximate estimation of damages caused by a deficiency of water in the irrigation of farm crops. Ibid.:99-113 (MIRA 16:11)

1. Laboratoriya gidroenergetiki (rukovoditel' - kand. tekhn. nauk B.G. Kovalenko) AN Kirgizskoy SSR.

L 23843-66 EWT(m)/EWP(j) IJP(c) RM

ACC NR: AP6007123 SOURCE CODE: UR/0079/66/036/002/0357/0359

AUTHOR: Golodnikov, G. V.; Shavva, T. G.

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

TITLE: Catalytic dehydrogenation of gamma-trialkylsilylpropyl alcohols. Part 3

SOURCE: Zhurnal obshchey khimii, v. 36, no. 2, 1966, 357-359

TOPIC TAGS: organosilicon compound, dehydrogenation, alcohol

ABSTRACT: The optimum conditions for the dehydrogenation of γ-methyldiethylsilylpropyl and γ-methyldipropylsilylpropyl alcohol over a copper catalyst were determined: the temperature is 300°-320°C, and the flow rate 100. The yields of aldehydes of the general formula $CH_3R_2SiCH_2CH_2CHO$ under these conditions were 24.4% ($R=C_2H_5$) and 26.9% ($R=C_3H_7$). The aldehydes were very unstable and apparently decomposed via a decarbonylation reaction:

$$CH_3R_2SiCH_2CH_2CHO \xrightarrow[R=C_2H_5,\ C_3H_7]{-CO} CH_3R_2SiC_2H_5$$

It is concluded that in contrast to the comparatively stable aldehydes having three like radicals at the silicon atom ($R_3SiCH_2CH_2CHO$, where $R=CH_3$, C_2H_5), aldehydes with unlike radicals at the silicon atom ($CH_3R_2SiCH_2CH_2CHO$, where $R=C_2H_5$, C_3H_7) are un-

UDC: 547.13'3 + 547.268

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L 23843-66
ACC NR: AP6007123

stable and tend to decompose during storage. Orig. art. has: 1 formula.

SUB CODE: 07/ SUBM DATE: 01Apr65/ ORIG REF: 00'/ OTH REF: 002

Card 2/2

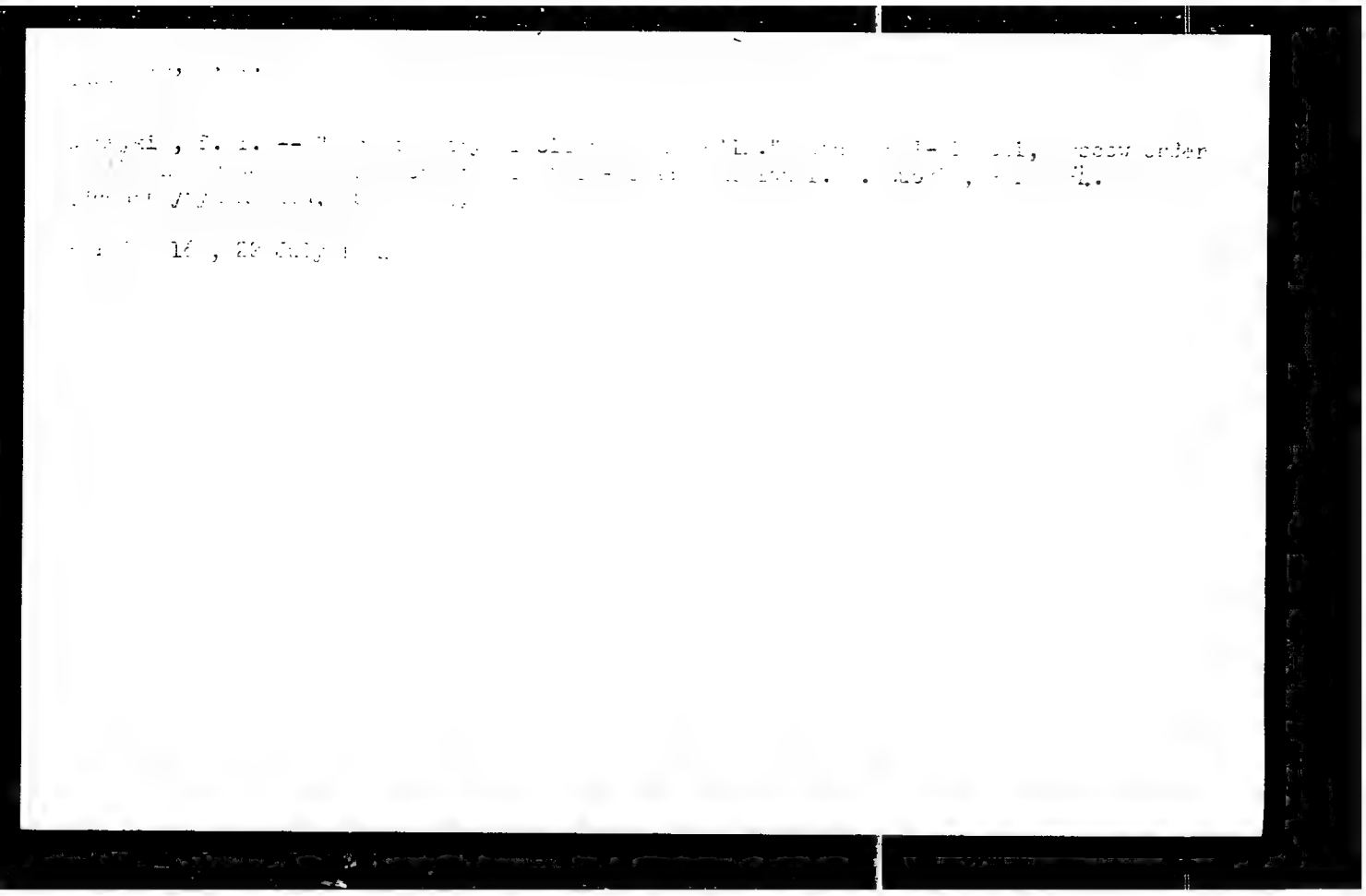
SHAVYAKOV, L.D., akademik; MAN'KOVSKIY, G.I., doktor tekhn.nauk

Problems of water control in building and operating bauxite mines in the northern Urals. Gor. zhur. no.5:19-24 My '58. (MIRA 11:6)

1.Institut gornogo dela AN SSSR.
(Ural Mountains--Bauxite) (Mine water)

TEREKHOV, K.S., inzh.; SHAVYKIN, M.I., inzh.

New method of joining metal fittings to porcelain cylindrical rods. Vest.elektromprom. 28 no.8:35-36 Ag '57. (MIRA 10:10)
(Electric insulators and insulation)



12-57-8-16088

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 8, p 7 (USSR)

AUTHOR: Shavykin, S.I.

TITLE: Bore-Hole Magnetometry by Means of a Static Magnetic Field (Magnitometriya skvazhin metodami staticheskogo magnitnogo polya)

PERIODICAL: Tr. Mosk. neft. in-ta (Transactions of the Moscow Oil Institute) 1955, Nr 15, pp 266-280

ABSTRACT: Obtained are the curves of the magnetic flux and axial component of the field of a permanent magnet for rocks differing in magnetic susceptibility which are encountered in a bore hole. From the author's synopsis.

Card 1/1

USSR/Physics of the Earth - Electric and Magnetic Field of the Earth, 0-4

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36401

Abstract: in operation, the problem of the variation of H along a hollow uniform magnetized cylinder is considered. The variation of H inside the cylinder is represented as a result of the action of the induced magnetic field, the flux lines of which are closed through the opening and have a direction opposite to the magnetizing field H_e. For weakly-magnetic rocks we have

$$\Delta Z = -2\pi\varkappa H_{ezf}(r, h, r_1, r_2), \qquad (1)$$

where h is the height of the cylinder, r_1 and r_2 its external and internal radii, and r is the coordinate of the measurement point. Analysis of equation (1) lead to the conclusion that if the stratum is sufficiently thick we have $\Delta Z_{max} = 4\pi\varkappa H_{ez}$, hence $\varkappa = \Delta Z_{max}/4\pi H_{ez}$.

Card 2/2

SYSOYEV, S.; SHAVYRIN, B.; KOZIN, A., red.; PETERSON, A., tekhn.red.

[Bryansk] Briansk. Briansk, Izd-vo "Brianskii rabochii," 1960. 6 p., illus. (MIRA 13:11)
(Bryansk--Views)

SHAVYRIN, Mikhail Vasil'yevich, inzhener; SOKOLOV, A.V., inzhener, redaktor; VERINA, G.P., tekhnicheskiy redaktor.

[Working metals by cutting; experience of machine-building plants of the Ministry of Communications] Obrabotka metallov rezaniem; iz opyta mashinostroitel'nykh zavodov MPS. Moskva, Gos.transp. zhel-dor.izd-vo, 1956. 86 p. (MIRA 9:6)

(Metal cutting)

KAZANSKIY, Georgiy Alekseyevich; KOSAREV, Aleksandr Aleksandrovich; SAMOKHVALOV, Sergey Feofilovich; URYUPIN, German Mikhaylovich; SHAVYRIN, M.V., inzh., red.; KHITROV, P.A., tekhn.red.

[Design and maintenance of all-metal passenger cars] Ustroistvo i remont tsel'nometallicheskikh passazhirskikh vagonov. Izd.2., perer. i dop. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 486 p. (MIRA 12:12)

(Railroads--Passenger cars)

SHAVYRIN, M.V., inzh.

Switch plants of the German Democratic Republic. Put' i put. khoz. 4 no.3:47 Mr '60. (MIRA 13:5)
(Railroads--Switches)

SUBJECT: USSR/Welding

135-1-7/14

AUTHORS: Orlov, B.D., Candidate of Technical Sciences; Shavyrin, V.N., Engineer; and Novosel'tsev, N.A., Engineer.

TITLE: X-ray inspection of spot-weld joints in high-strength aluminum alloys. (Rentgenovskiy kontrol'uzlov iz vysokoprochnykh alumini-yevykh splavov, svarivayemykh tochkami).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 1, pp 20-24. (USSR).

ABSTRACT: The article contains general information of X-ray inspecting, and X-ray photograph reading in aircraft building. As an advanced welding machine design of Soviet make there is mentioned the МТИП-type (MTIP-type), with stabilized welding impulses and considerably stabilized electrode pressure, which improves the quality of welds.
The article contains 9 photographs, 1 drawing, 2 tables, and 8 references - two of which are Russian.

INSTITUTION: Not stated.

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 1/1

18(2,3,5)

SOV/135-59-11-4/26

AUTHOR: Shavyrin, V.N., Engineer

TITLE: Glue-Welded Structures and Their Use

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 11, pp 8-11 (USSR)

ABSTRACT: When welding aluminum alloys, an increased corrosion resistance of welded joints at normal or elevated temperatures is often required. The best means of protection against corrosion is, in this case, the application of sulphuric acid anode oxidation. However, a preliminary oxidation of pieces to be welded is impossible owing to the high electrical resistance of the oxide film. Similarly, a subsequent oxidation after the welding is done, is not applicable due to the penetration of the electrolite into the clearance between the welded components. At the present time, a method has been worked out that permits filling of gaps by means of glue when spot welding is performed. The following persons participated in working out this method: L.B. Maseyev, A.V. Petrov, A.S. Shavlovskiy, B.D. Kirillov and N.M. Klimakina. During the research, it was established that the glues, brands VK32EM, VK-32-200 and FL-4,

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Glue-Welded Structures and Their Use

are particularly suitable when spot welding is performed. However, the first two brands are not always applicable partially due to a certain toxicity (glue VK-32-200), partially owing to the fact that its stability against the action of water and acids has not yet been sufficiently established (glue VK32EM). That is why the author recommends the application of glue FL-4. In a Table on p 6, strength of glue-welded joints is given. Testing of glue-welded pieces as to their corrosion resistance property was performed by N.A. Makarov, Ye.V. Artamonova and A.N. Tumanov (Fig 2). Welds with application of FL-4 pieces were tested at normal and elevated temperatures (up to 145°C); it was established that the glue durability and stability underwent no change under these conditions. Tests were carried out by R.Ya. Fiskina. There are 1 table and 5 photographs.

ASSOCIATION: NIAT

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S/135/61/000/008/005/011
A006/A101

1.2300 1573

AUTHORS: Andreyev, N.Kh., Candidate of Technical Sciences, Shavyrin, V.N., Engineer

TITLE: On the problem of breaking tests of welded and glue-welded spot joints

PERIODICAL: Svarochnoye proizvodstvo, no. 8, 1961, 13 - 14

TEXT: The magnitude of the breaking forces is one of the static strength characteristics of spot-welded joints. This force is mainly determined by tests with standard cross or box shaped specimens. It was found that by increasing the rigidity of specimens, the breaking strength of the spot welds could be raised. This was proved by breaking tests made with new specimens of higher rigidity, due to tubular stems welded onto the specimens, coaxially to the welded spot (the stem diameter was 20 - 25 mm for АМг 6 (AMg6) alloy 1.5 + 1.5 mm thick). Breaking tests were also performed with new D16AT alloy (2+2 mm). Specimens suggested by the authors, which consisted of two lathe-turned or press-forged (rigid) cups joined by a spot weld combined with glue (glue-welded specimens), a spot weld (welded specimen), or rivets (riveted specimen). It was established that the

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